

DIFFERENTIATING PHYSICAL DISCIPLINE FROM ABUSE:
A COMPARISON OF CHINESE AMERICAN MOTHERS AND
MANDATED NURSE REPORTERS OF ABUSE

by

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ABSTRACT

Background: Perceptions and use of physical discipline (PD) are grounded in culture. While the distinction between PD and child physical abuse (CPA) remains unclear, the subjective nuances between acceptable and unacceptable parent discipline behaviors may increase the risk of child abuse allegations for parents whose traditional parenting values endorse PD use. Although the reported rate of child maltreatment among Asian Americans is comparatively low, the rate of Chinese American parents reported for CPA is disproportionately high compared to the general population. It is imperative to understand how these minority parents differentiate PD from CPA, and how their differentiations compare with those of mandated reporters of child abuse.

Objectives: (1) To examine how Chinese American mothers differentiate PD from CPA, (2) to examine how pediatric nurses differentiate PD from CPA, (3) to describe how Chinese American mothers' differentiation between PD and CPA differ from those of pediatric nurses, and (4) to describe how acculturation influences Chinese American mothers' perceptions of PD and CPA.

Design and Methods: A cross sectional, descriptive study using Q-methodology was employed to generate holistic viewpoints of PD and CPA differentiation. The study was performed in two sequential phases: (1) semi-structure interviews were conducted to generate a list of statements related to the behavior or outcome of punishing a child, (2) participants sorted the statements on a predefined continuum ranging from "Most Unacceptable" to "Most Acceptable" to elicit their views on acceptable and unacceptable parent discipline behaviors. By-person factor analysis

was used to generate groups of participants who performed similarly on their sorts.

Acculturation levels of Chinese American mothers across groups were compared.

Sample: A convenience sample of Chinese American mothers were recruited and, stratified by generational status (i.e., foreign born or US born). Eleven Chinese American mothers participated in Phase 1, and 35 additional Chinese American mothers participated in Phase 2. Forty-eight pediatric nurses from one urban academic medical center with at least 2 years of pediatric nursing experience also participated in Phase 2 of the study.

Results: There was wide consensus on highly acceptable and highly unacceptable punishments across all viewpoints. However, there were important nuances in PD and CPA differentiations that stemmed from complex interactions among 5 contextual domains of PD (i.e. specific PD behavior, parent intention, PD outcome, PD delivery method, and pattern of PD use). Chinese American mothers' and pediatric nurses' views on PD versus CPA were equally diverse. Acculturation influenced the endorsement of PD among Chinese American mothers in this sample.

Conclusions: There was wide agreement on what discipline strategies constituted most acceptable and abusive parenting behaviors. However, the nuances in PD and CPA differentiations may create a potential for discrepant risks for child abuse allegations among Chinese American mothers and disparate tendencies to report child abuse among pediatric nurses. The relationships among the PD domains identified in this study warrant further investigation.

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To my father, Albert.

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CHAPTER ONE: INTRODUCTION

The cultural makeup of the US constantly evolves as the ethnic constitution of the American population continues to change. As of January 1, 2010, an estimated 12.6 million legal permanent residents (i.e. foreign-born immigrants) reside in the US, of which 8.1 million were eligible to naturalize as US citizens (Department of Homeland Security [DHS], 2011a). As the cultural composition in the US increases in complexity, contentions in various facets of daily life inevitably arise due to competing cultural worldviews. One important contention that has raised substantial public interest is parenting and definitions of acceptable parenting behaviors. For example, Amy Chua's *Battle Hymn of the Tiger Mother* (2011) generated a wide public response on differences in parenting ideals between "Western" parents and those who parent under traditional, ethnic values in the US. Additionally, opinions regarding the endorsement and use of physical discipline (PD) as a traditional parenting practice remain polarized (Gershoff, 2002).

In 1998, the American Academy of Pediatrics issued a policy paper to position their non-endorsement of PD, thus setting a cultural standard against PD use in the US. However, studies continue to show that PD remains a common discipline practice in the US, especially for young children (Straus & Stewart, 1999; Taylor, Lee, Guterman, & Rice, 2010; Zolotor, Theodore, Runyan, Chang, & Laskey, 2011). Importantly, minority groups (e.g. African Americans and Asian American) are more likely to endorse and use PD compared to their White, majority group counterparts (Deater-Deckard, Dodge, & Sorbring, 2005, Taylor et al., 2010).

BACKGROUND

Chinese Americans constitute the largest and fastest growing Asian American group, and comprise 5.5% of all immigrants to the US in 2010 compared to 3.8% in 2008 (DHS, 2011b). Further, the number of Chinese immigrants in the US has increased nearly fivefold between 2000 and 2006, making them the third largest immigrant group (Migration Policy Institute, 2011). Although the reported rate of child maltreatment among Asian Americans is comparatively low (Zhai & Gao, 2011), Chinese American parents reported for child maltreatment are more likely to be reported for physical abuse than other types of abuse or neglect, and at rates greater than those for the general population (35.5% versus 18.9% in non-Asian groups; Rhee, Chang, Weaver, & Wong, 2008). It is possible that this high rate of physical abuse reports among immigrant Chinese families reflects their child-rearing practices and long-established cultural beliefs that endorse the use of PD (Rhee et al., 2008). Indeed, immigrant families have been identified as being at risk for getting involved with the child welfare system due to cultural differences in parenting (Department of Health and Human Services [DHHS], 2001).

While some research has examined the impact of acculturation on Chinese immigrants' parenting attitudes, beliefs, and practices (e.g. Chuang & Su, 2009; Chuang, 2006; Costigan & Koryzma, 2011; Hulei, Zevenbergen, & Jacobs, 2006; Lau, 2010), few studies have specifically examined its effects on how Chinese American parents define and view PD as a strategy for disciplining their children. In addition, no known study has examined how Chinese American mothers differentiate PD

from child physical abuse (CPA), and how their differentiations may differ from those of mandated reporters of child abuse in the US.

The purpose of this study was to understand how Chinese American mothers and one group of mandated reporters of child abuse (i.e. pediatric nurses) differentiate PD from CPA. These variables were examined using Q-methodology to capture how Chinese American mothers and pediatric nurses differentiate acceptable and unacceptable discipline behaviors. Further, Chinese American mothers' levels of acculturation were measured to explore the influence of acculturation on PD and CPA differentiation.

SIGNIFICANCE OF THE STUDY

The value and impact of this study is four-fold: First, knowledge gained from this study can help practitioners and stakeholders develop clearer guidelines on normative versus non-normative parenting in this ethnic minority population. Currently, there is little data on parenting norms among Chinese Americans relative to other cultural groups living in the US; this ethnic group had been identified as being vulnerable to child abuse allegations, yet remains underrepresented in parenting research specific to PD (Kim, Lau, & Chang, 2006; Straus & Stewart, 1999). Second, understanding how PD and CPA differentiations vary by parents' levels of acculturation will impart new insight on how the acculturative process influences parenting practices and beliefs. This is of particular importance as some evidence suggests Chinese immigrant parents who are least acculturated are at higher risk for reports of child abuse (Rhee & Chang, 2006).

Third, comparing Chinese American mothers' distinctions between PD and CPA with those of mandated reporters of child abuse will inform our next steps toward closing the cultural gap in parenting perceptions and behaviors. Further, an enhanced understanding of these relationships may assist the development and implementation of prevention and intervention programs to help Chinese immigrant parents transition into their new culture. Parent training programs designed for Chinese immigrants are scarce, and engagement barriers related to cultural differences in parenting strategies and values have precluded access and utilization (Lau, Fung, & Yung, 2010). Understanding Chinese American mothers' perceptions of PD and CPA and how they differ from those of mandated reporters of child abuse will promote a shared understanding of normative parenting values in the US and ameliorate engagement barriers.

Lastly, this will be the first study to employ Q-methodology as a model for examining cultural discrepancies in parenting perceptions surround discipline versus abuse. Although endorsement and use of PD have been quantitatively investigated, few studies have qualitatively described how it is differentiated from abuse and the contextual differences that distinguish acceptable and unacceptable parenting discipline behaviors (Ferguson, 2013). The use of Q-methodology, which includes a systematic mix of quantitative and qualitative methods, will provide a holistic understanding of how PD and CPA are differentiated, and whether these differentiations may be affected by culture.

SPECIFIC AIMS

Primary aims:

- (1) Using Q-methodology, examine how Chinese American mothers differentiate physical discipline (PD) from child physical abuse (CPA).

Research Question: How do Chinese American mothers differentiate discipline behaviors as to being PD or CPA?

- (2) Using Q-methodology, examine how pediatric nurses differentiate PD from CPA.

Research Question: How do pediatric nurses differentiate discipline behaviors as to being PD or CPA?

- (3) Describe how Chinese American mothers' differentiation between PD and CPA differ from those of pediatric nurses.

Hypothesis: Chinese American mothers' PD and CPA differentiations will differ from pediatric nurses. (A non-directional hypothesis was used because we do not know how Chinese American mothers' and pediatric nurses' PD and CPA distinctions may differ.)

Exploratory aim:

- (1) Describe how acculturation influences Chinese American mothers' perceptions of PD and CPA

Hypothesis: Differentiations of PD from CPA will vary by Chinese American mothers' levels of acculturation. (A non-directional hypothesis was used because we do not currently know how acculturation influences the perceptions and differentiations of PD and CPA.)

LITERATURE REVIEW

Physical Discipline: Definition and Cultural Implications

Physical discipline (PD), corporal punishment, and spanking are used synonymously in the literature (Gershoff, 2002). There is a broad spectrum of PD behaviors, ranging from mild spanking (i.e. an open-handed strike on the buttocks or extremities) to more severe forms of physical punishments (e.g. hitting with an object). Although the prevalence of PD use reported in the literature varies widely, some evidence suggests that PD is still a common parenting practice in the US. For example, one population-based study found that approximately 65% of 3-year-old children were spanked at least once in the past month (Taylor et al., 2010); another study found that nearly 8 out of 10 preschool-aged children are still disciplined with spanking and slapping without marked change since 1975 (Zolotor et al., 2011). Younger children generally receive PD more frequently compared to older children (Straus & Stewart, 1999; Vittrup & Holden, 2010).

Despite being widely studied, the concept of PD and the boundary that differentiates PD from child physical abuse (CPA) remain poorly defined. According to Straus and Donnelly (2001), PD is defined as a parenting practice where physical force is used “with the intention of causing a child to experience pain, but not injury, for the purpose of correction or control of the child’s behavior” (p.4). However, one may argue that the presence of pain often signifies injury occurrence, albeit minor, while pain is sometimes the sole and salient indicator for injuries that have no overt signs and symptoms (e.g. blunt force injuries of the abdomen; DiMaio & DiMaio,

2001). Further, this definition does not include the duration, severity, or mode of delivery (e.g. use of an object), which may also be important indicators of CPA.

The legal definition of PD in the US is also unclear. Presently, no statute or federal law exists to ban PD use, and the definition of PD and its differentiation from CPA remains vague and inconsistent across States, often permitting “reasonable” PD while simultaneously prohibiting non-accidental infliction of injury (Coleman, Dodge, & Campbell, 2010). As the clinical and legal definitions and differentiation of PD and CPA remain unclear, our understanding of how mandated reporters of child abuse (e.g. nurses) differentiate PD from CPA also remains limited.

The long-term and detrimental effects of CPA have been well-substantiated by scientific evidence (e.g. Anne Lown, Nayak, Korcha, & Greenfield, 2011; Rohde et al., 2008; Walsh, Jamieson, MacMillan, & Boyle, 2007), but contentious findings on PD and its associated child outcomes (e.g. Gershoff, 2002; Larzelere, 2000) continue to propel divergent views on whether PD is an acceptable parenting practice and at what point do discipline behaviors become unacceptable. While a large body of evidence supports the deleterious effects of PD in children, e.g. increased internalizing and externalizing behaviors (e.g. Hao & Matsueda, 2006; Kerr, Lopez, Olson, & Sameroff, 2004; McLoyd & Smith, 2002; Ohene, Ireland, McNeely, & Borowsky, 2006) and poor developmental outcomes (e.g. Afifi, Brownridge, Cox, & Sareen, 2006; Bender et al., 2007), another body of research supports PD as an effective parenting tool that reduces noncompliance, aggression, and other externalizing behaviors (e.g. Bean & Roberts, 1981; Larzelere, 2008; Taylor & Redman, 2004).

Most research on PD and its effect on children have inherent methodological problems. Firstly, most of these studies are cross-sectional, which precludes inferring causation between PD use and negative child outcomes. Indeed, contrary to the common belief that PD *causes* negative child behaviors, some evidence suggests that parents increase PD use *because* of negative child behaviors (Sheehan & Watson, 2007). The concept and operationalization of PD are also poorly defined, often conflating mild spanking with more severe forms of physical punishment, thus potentially inflating effect sizes of PD and negative child outcomes (Ferguson, 2013). Lastly, most studies assess PD use with parent self-reports using Likert-type surveys, which impart significant response-set, social desirability, and recall biases due to respondents' tendency to under-report.

With these study limitations in mind, Ferguson (2013) conducted a meta-analysis of 45 longitudinal studies that examined PD and child outcomes. The author concluded that the impact of PD on negative child outcomes (i.e. higher rates of externalizing and internalizing symptoms, and poorer cognitive performance) is statistically significant. However, the effect sizes were small and trivial ($pr = 0.07$ to 0.10 for externalizing and internalizing outcomes and -0.11 for cognitive outcomes), particularly for younger children. These findings suggest PD confers no benefit as a parenting tool, but they also raise the question of whether PD use should be so highly condemned in our society. It appears that the use and outcomes of PD are culture-dependent, yet studies examining PD use and outcomes in culturally diverse populations remain relatively scarce (Ferguson, 2013).

Studies that examined PD across cultures uniformly suggest that the perception and use of PD are deeply grounded in the context of culture and, regardless of individual experiences, one's cultural surrounding remains a significant predictor of one's attitudes about PD (Douglas, 2006). The cultural perceptions of PD may also affect the outcomes of PD, i.e. parents who perceive PD as reasonable and normative may be more likely to exercise it in a controlled and instrumental manner whereas parents who perceive PD as non-normative may use it in anger and apply it a way that invokes fear and anxiety in the child (Gershoff et al., 2010). Further, children who perceive PD as non-normative are also more likely to respond negatively to its use (Gershoff et al., 2010; Lansford et al., 2005; Lansford & Dodge, 2008; Lansford, Deater-Deckard, Dodge, Bates, & Pettit, 2004). Therefore, examining parents' perceptions of PD within a cultural context is essential as they may affect how parents exercise PD, as well as how their children may respond.

While many studies support parents' PD endorsement as a predictor of PD use (e.g. Ateah & Durant, 2005; Vittrup, Holden, & Buck, 2006), our understanding of endorsement and non-endorsement of specific PD practices, as well as how parents mark the boundary between PD and CPA remains limited. As Gonzalez, Durrant, Chabot, Trocme, and Brown (2008) noted, "the point at which punishment begins to shade into abuse is subjectively and culturally defined." Therefore, people of different cultural backgrounds, upbringings, and personal values will likely have dissimilar PD endorsement and draw different PD and CPA distinctions. As a result, parents who use PD may be at higher risk for being reported for CPA if their parenting practices do not coincide with societal norms. Also, the vague

differentiation between PD and CPA may place parents who use PD at higher risk for committing CPA, and many believe that some episodes of abuse actually began as disciplinary encounters (Fontes, 2005). Therefore, it is important to examine how minority parents define and differentiate PD and CPA in order to establish a culturally congruent understanding of normative parenting across cultures.

Chinese versus Western Parenting

Chinese parenting is rooted in values and practices distinct from Western societies (Stewart et al., 1998). While Chinese parenting values collectivism, parental control, and emotional restraint, Western parenting emphasizes individualism, building independence, and parental warmth (Chao, 1994). In particular, Chinese parents exercise parental control to promote loyalty and obedience in their children (Yeh & Bedford, 2004) and strict disciplinary practices are often used to enforce control. Consequently, Chinese parents exhibit greater endorsement and acceptance of PD compared to their White and Hispanic counterparts (Hong & Hong, 1991; Jambunathan, Burts, & Pierce, 2000).

While parental control is associated with negative child outcomes in Western families (Kakihara, Tilton-Weaver, Kerr, & Stattin, 2009; Van Der Bruggen, Stams, & Bogels, 2008; Vieno, Nation, Pastore, & Santinello, 2009), research suggests that parental control is associated with better child psychological adjustment (Huntsinger & Jose, 2009), higher school achievement (Dornbusch, Ritter, Leiderman, Roberts, & Fraleigh, 1987), and better parent-child relational qualities (Shek, 2007) in Chinese families. Therefore, parental control and associated PD use may be considered positive and reasonable in the Chinese culture. Indeed, Asian

American children are less likely to label PD as abusive despite higher PD use by parents (Lau et al., 2006). These findings point to important differences in parenting beliefs, practices, and associated child outcomes in Chinese versus Western families.

The consensus from most research studies is that Chinese parents are authoritarian (i.e. parent use of control and punitive strategies, and expecting absolute obedience), which is assumed to be less favorable for children's development than authoritative parenting (i.e. parent use of inductive reasoning and rational guidance, and being sensitive to child's needs and opinions; Baumrind, 1971). However, Chao (1994) argued that the concept of authoritarian versus authoritative parenting "evolved from an American culture and psychology that is rooted in both evangelical and Puritan religious influences," and cannot be used to accurately describe, compare, or conclude the favorableness of Chinese parenting practices compared to those of other cultures.

Chinese parents follow the traditional notion of "training," which uses a set of practices that aims to instill a sense of respect and responsibility in their children (Chao & Sue, 1996). In addition to PD and parental control, Chinese parents are also more involved in promoting their children's success, have more physical closeness with their children, and are more likely to be the sole or central caretaker of their children (Chao, 1994; Rothbaum, Morelli, Pott, & Liu-Constant, 2000); all of which are positive parenting practices unaccounted for in authoritarian parenting. In addition, collectivism and emotional restraint are important Chinese cultural values that promote family harmony and cohesion, thus PD use likely stems from the necessity to promote child obedience and behavior regulation rather than an "angry

physical response to child transgressions” (Lau, 2010). Therefore, the merit of Chinese parents’ PD use and endorsement must be viewed in light of their cultural traditions and the intentions under which PD is exercised, particularly when examining the use of PD and its social acceptability in Chinese immigrants who are parenting in a culture that is different from their own.

Acculturation and Parenting in Chinese Immigrants

Recent research shows that Chinese American parents are aware of the cultural differences in parenting as they purposefully negotiate their ethnic values and practices to accommodate those of their host culture (Duncan, 2008). With persistent contact and cultural immersion, Chinese immigrant parents undergo an acculturative process that gradually changes their parenting attitudes and practices to create a parenting style that is distinctly situated between those of their Chinese and European American counterparts (Chiu, 1987; Lin & Fu, 1990). However, acculturation has demonstrated dichotomous effects on parenting efficacy and satisfaction in this ethnic group.

On one hand, viewing acculturation as a product of cultural immersion reveals that more acculturated parents express higher parenting efficacy, more positive parenting, and better psychological adjustment (Costigan & Koryzma, 2011). On the other hand, viewing acculturation as a process reveals the unique stressors and challenges these parents experience under the new social context, thereby increasing parental dissatisfaction (Xu, 2003). While more research using rigorous measures of acculturation is needed to better discern these relationships, it

is clear that immigrant parenting is a highly complex social task that is further complicated by the conflicting demands of the parents' ethnic and host cultures.

Immigrant parents also face the unique problem of parent-child acculturation discrepancy as immigrant children tend to adopt the values and behaviors of the host society at a faster rate than their parents (Birman & Trickett, 2001; Nguyen & Williams, 1989). Research findings suggest that Chinese immigrant families with higher parent-child acculturation discrepancies have more family conflicts (Tardif & Geva, 2006), higher perceived parenting challenges and feelings of uncertainty, and less parenting satisfaction (Buki, Ma, Strom, & Strom, 2003). In addition, much evidence supports a positive relationship between parent-child acculturation discrepancy and depressive symptoms among children in this immigrant group (Costigan & Dokis, 2006; Crane, Ngai, Larson, & Hafen, 2005; Fung & Lau, 2010; Hwang, Wood, & Fujimoto, 2010; Liu, Lau, Chen, Dinh, & Kim, 2009), particularly when acculturation discrepancies are associated with unsupportive parenting (Kim, Chen, Li, Huang, & Moon, 2009; Weaver & Kim, 2008) or unequal endorsement of parental control between parents and children (Juang, Syed, & Takagi, 2007). These findings highlight the importance of understanding how Chinese immigrant parents' levels of acculturation affect their parenting practices, yet our knowledge in this area remains inconclusive (Chuang, 2006; Hulei, Zevenbergen, & Jacobs, 2006).

Physical Discipline and Child Physical Abuse in Chinese Americans

The prevalence rates on PD use or CPA in Chinese Americans remain unclear and vary widely by sources, primarily due to the under-representation of Chinese

Americans in national surveys (Kim, Lau, & Chang, 2006; Straus & Stewart, 1999). However, it is evident that many Chinese Americans get involved with the child welfare system. For example, between January and June of 2000, over 77% of all requests for interpretation and translation in Asian languages in the Division of Child Protection in New York City were made in Chinese (DHHS, 2001). Evidence also supports that Chinese American parents reported for child maltreatment are more likely to be reported for physical abuse than other types of abuse or neglect, and at rates greater than those for the general population (35.5% versus 18.9% in non-Asian groups; Rhee et al., 2008). Indeed, in a sample of 220 active Chinese child abuse case files in California, CPA was the primary child maltreatment allegation (Rhee & Chang, 2006). Importantly, 54.6% of suspected perpetrators had resided in the US for 10 years or less (Rhee & Chang, 2006), suggesting new immigrants may be more vulnerable to reports of child maltreatment.

Cultural differences in parenting values and PD use may raise unsubstantiated CPA allegations, and immigrant families have been identified as being at risk for getting involved with the child welfare system because of cultural differences in parenting rather than an actual intent to harm their children (DHHS, 2001). Therefore, it is crucial to examine how these parents differentiate PD from CPA to understand their perceptions and attitudes on acceptable and unacceptable forms of parenting practices. Importantly, it is also imperative to compare these parents' PD and CPA differentiations with those of mandated reporters of child abuse, who apply a societal, clinical, and/or legal standard to normative parenting behaviors.

Nurses as Mandated Reporters of Child Abuse

Nurses in the US are bound by federal and state laws to report any “reasonable suspicion” of child maltreatment (i.e. all forms of child abuse and neglect). However, most states do not require child maltreatment training for nurses, and no studies have directly examined how nurses make decisions about what evidence constitutes CPA. Although professionals who are mandated reporters (e.g. law enforcement, teachers, and social workers) provide the majority of child maltreatment reports to child protection agencies (Flaherty, Sege, Mattson, & Binns, 2002), only 8.4% of these referrals come from healthcare providers, including nurses (Eisbach & Driessnack, 2010). Many studies support diagnostic uncertainty and lack of confidence as the main reasons for healthcare providers’ hesitancy or failure to report (e.g. Flaherty, Sege, Binns, Mattson, & Christoffel, 2000; Gunn, Hickson, & Cooper, 2005; Flaherty, Sege, Price, Christoffel, Norton, & O’Connor, 2006), which were primarily attributed to the lack of education in child maltreatment identification. Indeed, child abuse training varies across nursing programs and is seldom culture based. Currently, only two states mandate child maltreatment training for nurses (i.e. Iowa and New York; Iowa Board of Nursing, n.d.; New York State Education Department, 2013). As a result, nurses continue to report limited and inadequate training in child maltreatment identification (Piltz & Wachtel, 2009).

Studies show that recent child maltreatment training for healthcare providers is associated with increased suspicion, identification, and reporting of maltreatment (Flaherty, Sege, Binns, Mattson, & Christoffel, 2000; Flaherty, Sege,

Mattson, & Binns, 2002). However, Paavilainen and colleagues (2002) suggest that theoretical knowledge alone (i.e. injury assessment and identification) may not always be practical for nursing and medical staff due to the complexities of the circumstances the surround initiating abuse reports. This is supported by Eisbach and Driessnack (2010), who found that nurses' reporting decisions may be simple or complex – while severe and suspicious injuries warrant immediate reporting, nurses often encounter cases that present less overt signs and symptoms or only include subjective data (e.g. child's disclosure of maltreatment). These complex circumstances may delay or preclude nurses from reporting suspected cases of child abuse, and supports the importance of understanding the nuances that affect nurses' determination of whether different parent discipline behaviors are considered acceptable or reportable.

To date, little is known about the factors that contribute to nurses' suspicion, identification, or reporting of child maltreatment. Between 1996 and 2007, only 17 studies have been conducted to examine these issues, 4 of which were conducted in the US (Piltz & Wachtel, 2009). Some studies show that nurses rely on their intuition when reporting abuse (e.g. Ling & Luker, 2000), but their level of suspicion and intent to report are also affected by patient factors, including minority race/ethnicity (Flaherty, Sege, Mattson, & Binns, 2002; Land & Barclay, 2008). Further, some evidence suggests that reporting tendencies are also affected by healthcare providers' attitudes toward PD (Ashton, 2000), and it is crucial to examine how nurses define various forms of child maltreatment, including CPA and

its differentiation from PD, to understand how nurses' perceptions may affect their decision to report.

THEORETICAL FRAMEWORK

The perception and use of physical discipline (PD) are deeply grounded in the context of culture (Douglas, 2006). This study was guided by the acculturation framework to assess the influence of the acculturative process on Chinese immigrant parents' perceptions and use of PD as they relocate to the US.

Acculturation is a widely studied concept that broadly describes the adoption of beliefs and behaviors of one's surrounding culture based on persistent cultural contact and immersion (Al-Omari & Pallikkathayil, 2008; Berry, 1997; Gibson, 2001). However, problems in measuring acculturation arise as the conceptualization of acculturation increases in complexity.

Kim and Abreu (2001) reconceptualized acculturation to include four dimensions (behaviour, values, knowledge, and cultural identity), which are separated into private (e.g. values and identity) and public (e.g. behavior) domains. While earlier research used generational status as a proxy to measure acculturation, this was found to be a poor indicator because it does not demonstrate the adaptation or relinquishment of host or ethnic values, beliefs, and practices (Phinney & Flores, 2002). Contemporary research primarily measures acculturation with two models – linear and orthogonal.

The linear (or uni-dimensional) model posits that acculturation is a single process where one simultaneously loses their ethnic (traditional) characteristics when adopting the host characteristics, thus the level of ethnic and host orientation

are inversely related. Although this approach is parsimonious and generates a single acculturation score that helps to understand acculturation variance as standard deviations from the mean, it is an inadequate measure of acculturation as a complex, multi-domain construct (Cuellar, 2000). Conversely, the orthogonal model, proposed by Berry (1980), supports a bi-dimensional framework where one's ethnic and host characteristics move along separate and unrelated continuums, creating two distinct levels of orientation. This approach provides a richer representation of acculturation by assigning two distinct scores (i.e. host and ethnic) or categorizing people based on their cultural orientation (e.g. host-oriented, ethnic-oriented, or bicultural). However, it is statistically complex, it precludes making direct correlations with other measures, and it requires nonparametric correlational coefficients (Cuellar, 2000).

In this study, both linear and orthogonal levels of acculturation were measured to help discern the patterns of socialization parents undertake while parenting under the new social context. Currently, Chinese immigrant parents do not appear to adhere to one particular model of acculturation; some evidence suggests that mothers are more likely to follow the linear model, whereas fathers are more likely to follow the orthogonal model (Costigan & Su, 2004). Therefore, only mothers were included in this study to avoid possible confounding effects of parents' sex, and both models of acculturation were used to examine how they relate to Chinese American mothers' perceptions of PD.

SUMMARY

The perception and use of PD is culture-based. Although the deleterious outcomes of CPA are well-documented, the use and outcomes of PD remains controversial. The legal definition of CPA and its delineation from PD is unclear, and parents who endorse PD based on their traditional values have been identified as being at risk for child abuse allegations. Further, it remains unclear how mandated reporters of child abuse perceive different parent discipline behaviors and differentiate them from abuse. Therefore, the primary goal of this dissertation research was to understand how one group of minority parents (i.e. Chinese American mothers) differentiate PD from CPA, and compare their differentiations with one group of professional mandated reporters of child abuse (i.e. pediatric nurses) to identify gaps in perceptions of PD and CPA. Additionally, Chinese American mothers' acculturation levels were assessed to explore the influence of the acculturative process on immigrant parents' parenting perceptions and beliefs.

DISSERTATION ORGANIZATION

This dissertation consists of six chapters. Chapter One provided an overview of the dissertation study, and included the study purpose and aims, the theoretical framework that guided the study, and a review of relevant literature.

Chapter Two (Manuscript One) provides a synthesis of 22 studies focused on the implications of acculturation for parenting among Chinese immigrants. Findings from this literature review suggest that acculturation influences parenting beliefs, attitudes, and practices, as well as parent-child relationships among Chinese immigrants. Further, acculturation discrepancies between parents and children are

associated with negative child outcomes. This manuscript was published in 2014 in the *Journal of Transcultural Nursing*. The citation is as follows:

Ho, G.W.K. (2014). Acculturation and its implications on parenting for Chinese immigrants: A systematic review. *Journal of Transcultural Nursing*, 25(2), 145-158.

Chapter Three outlines the methodology used to guide this research, including a brief description of Q-methodology, the study design, study subjects and settings, data collection and analysis plan, protection of human subjects, and instrumentation.

Chapter Four (Manuscript Two) compares the use of Q-methodology and Likert scales to examine perceptions and attitudes in nursing research. This manuscript critically examines the strengths and limitations of Likert scales and offers a brief introduction to Q-methodology as an alternative approach to understanding health-related perceptions and attitudes in nursing research.

Chapter Five reports the findings from this dissertation work. This chapter begins with a description of the Q-sample, which was generated from Phase 1 of this study. Following are the results of the study by study aim, organized into three parts. *Part I* addresses Specific Aim 1 and Exploratory Aim 1, and reports findings on Chinese American mothers' PD and CPA differentiations, and the influence of acculturation on their perceptions of PD and CPA. *Part II* (Manuscript Three) addresses Specific Aim 2 and presents the results on how pediatric nurses differentiate PD from CPA. *Part III* (Manuscript Four) addresses Specific Aim 3 and describes the differences in PD and CPA distinctions among Chinese American mothers and pediatric nurses.

Chapter Six presents a concise summary of the dissertation work and integrates the findings, including those not described in Chapters 1 through 6. Study strengths and limitations, and implications of the findings for future research and practice are also presented.

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CHAPTER TWO: MANUSCRIPT ONE

Acculturation and its Implications on Parenting for Chinese Immigrants: A Systematic Review

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ABSTRACT

Purpose: To systematically review and synthesize existing findings on acculturation and its implications on parenting for Chinese immigrants. Method: Three electronic databases were searched for original research articles that examined acculturation and its influence on parenting in Chinese immigrants. Results: Twenty-two studies were included. Findings suggest that acculturation influences parenting beliefs, attitudes, and practices, as well as parent-child relationships among Chinese immigrants. Acculturation discrepancies between parents and children are associated with negative child outcomes. Discussion and Conclusions: Further research is needed to better understand the relationships among acculturation and parenting perceptions, parent-child relationships, and parent-child acculturation discrepancies and associated child outcomes. In particular, longitudinal studies with larger samples and multiple methods are needed to suggest causal inferences and validate these relationships. Implications for Practice: Nurses are at the unique junction to identify these problems through interacting with individuals and families at the clinical and mental/community health levels.

INTRODUCTION

Expatriates of Chinese descent constitute the largest immigrant population worldwide, and their rate of migration continues to accelerate, with a large portion settling in North America, Western Europe, and Australia (Skeldon, 1996). In the United States alone, the number of Chinese immigrants has increased nearly fivefold between 2000 and 2006, making them the third-largest immigrant group (Migration Policy Institute, 2011). While many studies have been conducted to examine the role of acculturation in Chinese immigrants, researchers have shifted their attention to acculturation and its implications on parenting for this population in recent decades. This change in focus was motivated by the realization that Chinese parenting is rooted in values and practices distinct from Western societies; namely, while Chinese parenting ideals value collectivism, parental control, and emotional restraint, Western parenting emphasizes individualism, independence building, and parental warmth (Chao, 1994). These differences create a unique tension for Chinese immigrant parents who are raising their children in a culture that conflict with their own traditions.

Two decades ago, a body of research emerged that examined cross-cultural variations in parenting among Chinese, Chinese immigrant, and Caucasian parents. In these studies, investigators found that Chinese and Caucasian parents were highly divergent in their parenting practices and beliefs, while Chinese immigrant parents measured nearly in the middle (C. C. Chiu, 1987; Lin & Fu, 1990). Furthermore, these findings were applicable to Chinese immigrants who migrated to a Western society, regardless of their migration destination (Rosenthal & Feldman, 1990).

Acculturation was identified as the impetus for the gradual change in parenting beliefs, attitudes, and practices among Chinese immigrant parents, resulting in a parenting style uniquely situated between those of their Chinese and Caucasian counterparts. These findings prompted further research on the processes and patterns of socialization among Chinese immigrant parents and how their parenting beliefs, attitudes, and practices are shaped to accommodate the social expectations of both their culture of origin and their culture of relocation.

Acculturation is a widely studied concept that broadly describes the adoption of beliefs and behaviors of one's surrounding culture based on persistent cultural contact and immersion (Berry, 1997), and a significant advancement in research on acculturation and parenting in Chinese immigrants in the last decade is evident. In addition, recent research findings demonstrate that acculturation influences parent-child relationships as well as children's mental health outcomes among Chinese immigrants, which has direct practice implications for nurses serving this unique population. While a large body of literature has examined and synthesized findings on parenting in different immigrant ethnic groups (e.g., Halgunseth, Ispa, & Rudy, 2006; S. Y. Kim & Wong, 2002), no existing literature has reviewed and critiqued the research specific to acculturation and parenting in Chinese immigrants. Therefore, the purpose of this systematic review was to synthesize the current knowledge on the role of acculturation and its implications on parenting for Chinese immigrant families.

METHODS

Three electronic databases (PubMed, CINAHL Plus, and PsycINFO) were systematically searched to identify all relevant research articles that were published before August 2012. Search terms included Chinese, immigrant, acculturation, parent, and parenting. The search limits were (1) original research and (2) written in English. The following inclusion criteria were used: original research that specifically examined (1) a Chinese immigrant population and (2) the influence of acculturation on parenting, and included (3) acculturation as a primary variable or concept of interest (i.e., measurement of acculturation must be clearly delineated if study was quantitative in nature) and (4) Chinese fathers and/or mothers in the study sample. The chosen studies were analyzed according to the quality of research, with particular attention to their design, methods, and presentation of results.

The first database search was conducted via PubMed, which comprises more than 20 million citations for biomedical literature from MEDLINE and other life science books and journals (U.S. National Library of Medicine, 2009). This database was used first because it has the most comprehensive health sciences research archival. The second database searched was CINAHL Plus, which provides indexing for more than 4,500 journals from the fields of nursing and allied health (EBSCO, 2011). The final database search was conducted with PsycINFO, which is the largest resource devoted to peer-reviewed literature in behavioral science and mental health (EBSCO, 2011).

An initial literature search obtained a total of 269 citations (99 from PubMed, 24 from CINAHL Plus, and 146 from PsycINFO). A title screen was conducted, which eliminated 115 records that were either duplicates or irrelevant, producing 154 unique citations. Then, all citations were subjected to full-text article screening, and 22 research articles were deemed eligible per the inclusion criteria. From the 22 articles, a hand search of the reference lists was conducted to identify any relevant citations. From the reference lists, 15 potential citations were identified, which were screened by abstract and in full. The hand search resulted in 2 additional articles that met the inclusion criteria. In total, the electronic database searches and the hand search yielded 22 articles that met the inclusion criteria for this review. Figure 2.1 summarizes the article selection process.

RESULTS

The literature search reveals that the implications of acculturation for immigrant parents extend beyond its effects on parenting beliefs, attitudes, and practices. Acculturation increases the complexity of parenting because immigrant parents and their children negotiate their values and beliefs differently under the new social context. Studies have shown that children from immigrant families tend to adopt the values and behaviors of the host society at a faster rate than their parents (Birman & Trickett, 2001; Nguyen & Williams, 1989), which raises the unique problem of parent-child acculturation discrepancy. Researchers are beginning to address this issue in Chinese immigrant families, and their studies will be an integral focus of this review.

This literature review begins with an overview of the conceptualization and measurement of acculturation. Then, the studies are reviewed and summarized according to their focus: (1) acculturation and its influence on Chinese immigrants' parenting beliefs, attitudes, and practices; (2) differences in acculturation between Chinese immigrant parents and children; and (3) acculturation, parenting, and child adjustment/mental health outcomes in Chinese immigrants. Finally, a discussion of findings is presented, concluding with recommendations for future research and nursing implications.

Conceptualization and Measurement of Acculturation

Acculturation research continues to face many methodological challenges, particularly in its operationalization and measurement. While some researchers focused on behavioral characteristics (e.g., language use, diet, customs, and cultural activities), others sought to examine the changes in inherent values and beliefs. B. S. K. Kim and Abreu (2001, as cited in Dao, Teten, & Nguyen, 2011) produced the most recent conceptualization of acculturation to include four dimensions (behavior, values, knowledge, and cultural identity), which could be separated into private (e.g. values and identity) and public (e.g. behavior) domains. However, the feat of unifying and operationalizing these dimensions and domains remains challenging.

Problems in measuring acculturation arise as the conceptualization of acculturation increases in complexity. While earlier research relied on generational status as an indicator of acculturation, it was found to be a poor measure of acculturation because it does not demonstrate the adaptation or relinquishment of host or ethnic values, beliefs, and practices (Phinney & Flores, 2002). In

contemporary research, investigators primarily measure acculturation on the basis of two models—linear and orthogonal. The linear (or unidimensional) model posits that acculturation is a single process where one simultaneously loses his or her ethnic (traditional) characteristics when adopting the host characteristics. Conversely, the orthogonal model, proposed by Berry (1980), supports a bidimensional framework of acculturation where one's ethnic and host characteristics move along separate and unrelated continuums, thus creating two distinct levels of orientation (ethnic and host). Each model has its unique advantages—the linear model is more parsimonious, but the orthogonal approach provides a more in-depth examination of acculturation (Cuellar, 2000).

In this review, generational status was used as an acculturation indicator in one study (Juang, Syed, & Takagi, 2007). In other studies, acculturation was measured according to the orthogonal model in 12 studies (Costigan & Dokis, 2006a; Costigan & Su, 2004; Fung & Lau, 2010; Hulei, Zevenbergen, & Jacobs, 2006; Hwang, Wood, & Fujimoto, 2010; S. Y. Kim, Chen, Li, Huang, & Moon, 2009; S. Y. Kim, Chen, Wang, Shen, & Orozco-Lapray, 2013; Lim, Yeh, Liang, Lau, & McCabe, 2009; Liu, Lau, Chen, Dinh, & Kim, 2009; Tardif & Geva, 2006; Wang, Kim, Anderson, Chen, & Yan, 2012; Weaver & Kim, 2008); the linear model was used in 4 studies (Buki, Ma, Strom, & Strom 2003; Chuang, 2006; Chuang & Su, 2009; Crane, Ngai, Larson, & Hafen, 2005); both models were used in 2 studies (Costigan & Koryzma, 2011; Costigan & Dokis, 2006b); acculturative stress was directly measured in 2 studies (Lau, 2010; Xu, 2003); and 1 study was qualitative (Duncan, 2008).

The most frequently used orthogonal acculturation measures were the Acculturation Rating Scale for Mexican Americans and the Vancouver Index of Acculturation, while the most frequently used linear acculturation measure was the Cultural Life Style Inventory. The Suinn-Lew Asian Self-Identity Acculturation Scale is the only instrument that includes both linear and orthogonal measures and was used in both linear and orthogonal studies. Of particular importance is that all the instruments used were adapted from other cultures (e.g., Mexican Americans or Asians at large) and were not normed specifically for Chinese immigrants.

Finally, measuring parent-child acculturation discrepancies also remains challenging. In most of the studies reviewed, investigators examined either the perceived discrepancy (i.e., acculturation discrepancy calculated from difference in parent and child acculturation scores reported by either the parent or the child alone), which risks over- or underestimation of each other's level of acculturation (Birman, 2006), or the actual discrepancy (i.e., acculturation discrepancy calculated from difference in acculturation scores reported by the parent and the child), which is limited by having two different anchors of understanding from separate self-reports. In one study, Hwang and colleagues (2010) used an instrument to directly measure acculturation differences between mothers and children, but this instrument is still in its early stages of psychometric testing. In a recent study, S. Y. Kim and colleagues (2013) used multilevel modeling to estimate acculturation discrepancy in parent-adolescent dyads, which was proposed to be more precise, stable, and accurate.

Table 2.1 presents the study methods, sample population and characteristics, and acculturation measures used in the reviewed studies. The major findings of these studies are categorized according to their focus and presented in Table 2.2. Of note, 5 of the 22 reviewed articles were based on findings from a longitudinal study using the same sample.

Acculturation and Its Influence on Parenting Beliefs, Attitudes, and Practices

The influence of acculturation on parenting beliefs, attitudes, and practices in Chinese immigrant parents was examined in seven studies. In the only qualitative study, Duncan (2008) interviewed 12 Chinese immigrant father-mother dyads and found that these parents were aware of the cultural differences in parenting as they purposefully attempt to negotiate their ethnic values and practices to accommodate those of their host culture. Furthermore, parents also expressed that assimilation and retention of traditional values were not mutually exclusive, which supports measuring acculturation in an orthogonal model. However, this study was limited by interviewing parents as dyads, which precluded understanding maternal and paternal differences.

The influence of acculturation on parenting perceptions and attitudes was examined in three studies. Chuang and Su (2009) examined the effects of acculturation on parenting beliefs by comparing two groups of Chinese mothers and fathers who resided in China and Canada. On the basis of Baumrind's parenting typologies (1971), they found that parents in China more readily endorsed authoritarian parenting beliefs (i.e., emphasizing parental control and use of punitive strategies, expecting absolute obedience from their children) and Chinese

Canadian parents more readily endorsed authoritative beliefs (using inductive reasoning and rational guidance, being sensitive to their children's needs and opinions). However, these differences were largely unrelated to the parents' reported levels of acculturation. Furthermore, Chinese Canadian mothers who were more acculturated unexpectedly endorsed more authoritarian beliefs. These inconclusive findings may be attributed to the study's small sample size (67 Chinese Canadian and 59 Chinese father-mother dyads), their short length of residence in the host country ($M = 3.78$ years), and the use of a linear measure of acculturation. Costigan and Koryzma (2011) used an orthogonal measure of acculturation and found that parents who were more oriented to the host culture reported stronger feelings of parenting efficacy, which was related to better psychological adjustment and positive parenting.

However, Xu (2003) examined maternal satisfaction and found that acculturation could manifest as occupational, parental, marital, social, and/or cultural stressors that negatively affect maternal satisfaction among 138 Chinese immigrant mothers. In addition, parental, marital, and immigrant acculturative stressors were the most consistent predictors of maternal dissatisfaction. These findings demonstrated acculturation's dichotomous effects on parenting efficacy and satisfaction; that is, while viewing acculturation as a product of cultural immersion reveals that more acculturated parents were associated with more positive parenting, viewing acculturation as a process reveals the unique stressors and challenges that immigrant parents experience under the new social context, thereby increasing parental dissatisfaction. However, the cross-sectional nature of

these studies precluded inferring causal inferences between acculturation and parental efficacy or satisfaction.

Last, the influence of acculturation on parenting practices was examined in three studies. In these, investigators found no association between parental acculturation and parental control (Chuang, 2006), verbosity and laxness (Hulei et al., 2006), or physical discipline use (Lau, 2010) in Chinese immigrants. These findings suggest that some parenting practices may be inherently similar across cultures. However, it may also be attributed to the use of small and homogeneous samples, as well as social desirability bias stemming from the use of self-reports and underreporting. Furthermore, all these studies used linear measures of acculturation, whereas using orthogonal measures may further examine parents' host and ethnic orientation, which is central to the endorsement or rejection of different parenting practices.

Differences in Acculturation Between Chinese Immigrant Parents and Children

Acculturation discrepancies between parents and children were examined in four studies. In two studies, investigators examined the acculturation processes among Chinese immigrant parents and children and found that fathers, mothers, and children acculturate differently. While Chinese immigrant mothers followed a linear model of acculturation (i.e., host and ethnic orientations are inversely related), Chinese immigrant fathers and children followed an orthogonal model of acculturation (i.e., host and ethnic orientations are largely unrelated; Costigan & Su, 2004). Furthermore, Chinese immigrant fathers and mothers were significantly different in four of five domains of acculturation (Costigan & Dokis, 2006b).

However, these studies were limited by their cross-sectional design, precluding the ability to discern whether parents and children follow the same model of acculturation over time.

The role of parent-child acculturation discrepancy and its effects on mother-child relationships were examined in two studies. Findings from both studies suggest that high mother-child acculturation discrepancies were related to more conflicts (Tardif & Geva, 2006), higher perceived parenting challenges and feelings of uncertainty, and less maternal satisfaction (Buki et al., 2003). A particularly salient finding in these two studies was the role of children's gender. In a study of 164 Canadian Chinese mother-child dyads, Tardif and Geva (2006) found that mothers generally endorsed more power-assertive behaviors with sons than daughters, which may be related to the findings of Buki et al. (2003), who found that Chinese immigrant mothers generally perceived higher levels of acculturation discrepancy and uncertainty with sons than daughters. Chinese immigrant mothers' general perception of higher acculturation discrepancy with sons may have contributed to their increased endorsement for assertive behaviors with sons as compared to daughters.

Buki et al. examined the nature of mother-child conflicts and found that dyads with high acculturation discrepancies reported more conflicts about interpersonal issues as compared to dyads with low acculturation discrepancies, where conflicts focused more on daily activities and chores. However, this must be interpreted in light of the children's ages (10-14 years), as early adolescence may present a unique period when children begin to experiment with exerting their own

independence. Although mothers' acculturation levels continued to play a significant role, the differences in conflict nature may be an artifact of these children's developmental stage rather than an association with mother-child acculturation discrepancy.

Acculturation, Parenting, and Child Outcomes in Chinese Immigrants

The relationship between parenting, acculturation, and child adjustment and mental health outcomes in Chinese immigrants was examined in 11 studies. In most studies, investigators examined depressive symptomatology alone (Hwang et al., 2010; Juang et al., 2007; Kim et al., 2009; Weaver & Kim, 2008) or in conjunction with other adjustment or mental health outcomes, such as child delinquency (Crane et al., 2005), conflict and achievement motivation (Costigan & Dokis, 2006a), internalizing and externalizing behaviors (Fung & Lau, 2010), academic performance (Kim et al., 2013), or child distress (Lim et al., 2009). In 2 studies, investigators examined conduct problems and delinquency as primary outcome variables (Liu et al., 2009; Wang et al., 2012).

Liu and colleagues (2009) reported the cross-sectional results for Wave 1 of a large cohort study that followed 444 Chinese immigrant families. Their findings suggest that maternal acculturation toward the American orientation was associated with lower use of harsh discipline, higher maternal monitoring behaviors, and, subsequently, lower levels of conduct problems in adolescents. However, they found no relationship between paternal acculturation and adolescent conduct problems (despite a positive association between paternal acculturation and monitoring); thus, paternal data was not further analyzed or reported. Wang

and colleagues (2012) reported the longitudinal results of the same cohort study after a 4-year follow-up. Using structural equation modeling, they found that higher parent-adolescent acculturation discrepancy in the American orientation (but not in the Chinese orientation) was indirectly related to more adolescent delinquency, mediated by adolescents' perception of parental knowledge and contact with deviant peers. This pathway was found to be significant both concurrently (i.e., within cross-sectional analyses) and longitudinally. Together, these findings suggest that parents' acculturation in the host orientation may be more saliently related to children's conduct or delinquent behaviors.

Understanding depressive symptomatology in Chinese American youths is particularly important as study findings have consistently demonstrated that Chinese American adolescents, particularly those over the age of 15, have a higher prevalence and risk for depressive symptoms compared to their non-Chinese peers (Chen, Haas, Gillmore, & Kopak, 2011). Furthermore, major depression is a significant problem in Chinese American adults and youths (Hwang, Chung, Takeuchi, Myers, & Prabha, 2005; Hwang, Myers, & Takeuchi, 2000), and acculturative stress (i.e., the stress of relocation, adapting to a new environment, and loss of social support networks) was hypothesized to contribute to the high incidence of depression in this immigrant group (Hwang et al., 2005).

In this review, depressive symptoms were the sole child outcome variable in four studies. Findings from these studies uniformly suggest a positive association between parent-child acculturation discrepancy and depressive symptoms in children, particularly when acculturation discrepancies were associated with

unsupportive parenting (Kim et al., 2009; Weaver & Kim, 2008) or unequal endorsement of parental control between parents and children (Juang et al., 2007). However, it is important to note that the findings of Juang and colleagues (2007) may be limited by the use of generational status (first, second, third, or later) as an indicator of acculturation. Hwang and colleagues (2010) measured parent-child acculturation discrepancy based on the acculturative family distancing theory (Hwang, 2006). The Acculturative Family Distancing Scale is based on a more proximal and problem-focused approach to directly evaluate the distancing that occurs between parents and youths as a result of communication difficulties and cultural value incongruence. In this study, Hwang et al. (2010) found that acculturative family distancing between mothers and children was related to an increased risk of youth depression. However, all these articles reported cross-sectional data, which precluded drawing causal inferences between acculturative family distancing or parent-child acculturation discrepancy and child depressive symptoms.

Depressive symptomatology was also examined in conjunction with other child adjustment and mental health outcomes in five studies. Crane and colleagues (2005) supported previous findings that depressive symptoms in children are positively associated with parent-child acculturation discrepancy. However, contrary to Wang and colleagues (2012), they did not find an association between acculturation discrepancy and delinquent behaviors in children, which may be attributed to their sole measure of the ethnic dimension of acculturation. Costigan and Dokis (2006a) and Fung and Lau (2010) conducted cross-sectional survey

studies using an orthogonal acculturation measure and found that higher discrepancies in ethnic orientation were associated with poorer adjustment (Costigan & Dokis, 2006a) and more internalizing behaviors in children (Fung & Lau, 2010), while discrepancies in host orientation were not significantly associated with these child outcomes. However, these findings must be interpreted with caution, as both studies reported relatively low levels of negative child outcomes and the statistical significance in their findings may not be clinically significant. On the contrary, in a longitudinal cohort study, S. Y. Kim and colleagues (2013) reported that higher parent-child acculturation discrepancy in the host orientation (not in the ethnic orientation) was related to more depressive symptoms and lower academic performance, which persisted from early adolescence to middle adolescence. Furthermore, their findings suggest that the relationship between parent-child acculturation discrepancy and child maladjustment was more significant among father-adolescent dyads than mother-adolescent dyads.

Lim et al. (2009) conducted a study with 81 mother-child dyads that yielded somewhat different results. They found that youth who were less acculturated than their mothers were more likely to experience distress (i.e., depressive, psychological, and physical somatization symptoms) than those who were more acculturated than their mothers. These results contradicted with mainstream findings where negative outcomes of parent-child acculturation discrepancy were primarily attributed to children acculturating at a faster rate than their parents. However, the children sampled for this study were between the ages of 12 and 23, and older children, especially those entering early adulthood, may have more social

interactions outside the home, where acculturation plays a large role in the child's social functioning. Therefore, the distress in less acculturated children may not be attributable to mother-child acculturation discrepancy but instead related to discrepant values and behaviors with their social surroundings.

Demographic Variable

Among the studies reviewed, more studies included Chinese immigrant mothers than fathers (22 vs. 15). Furthermore, when fathers were included, they were sometimes excluded in the analysis (Liu et al., 2009) or analyzed as an aggregate with mothers (Crane et al., 2005; Duncan, 2008; Fung & Lau, 2010). However, 7 of the 15 studies that included fathers found significant differences in the processes and outcomes of acculturation between fathers and mothers (Chuang & Su, 2009; Costigan & Dokis, 2006a, 2006b; Costigan & Su, 2004; S. Y. Kim et al., 2009; S. Y. Kim et al., 2013; Weaver & Kim, 2008). As previously noted, Costigan and Su (2004) and Costigan and Dokis (2006b) found that Chinese immigrant parents of different genders prescribed to different models of acculturation. Furthermore, fathers' and mothers' acculturation in the ethnic and host orientations contributed differently to their children's adjustment. In particular, fathers' host orientation, whereas mothers' ethnic orientation, played a more significant role in their children's depressive symptoms (S. Y. Kim et al. 2009; Weaver & Kim, 2008). The pathway between parent-child acculturation discrepancy and child depressive symptoms and academic performance was also more significant in father-adolescent dyads than mother-adolescent dyads (S. Y. Kim et al., 2013). Lastly, mother-child acculturation discrepancies in cultural behavioral domains, as

opposed to father-child acculturation discrepancies in cultural values domains, played more significant roles in children's depressive symptoms (Costigan & Dokis, 2006a). Thus, the differences found in these studies may reflect the different acculturative processes that Chinese immigrant mothers and fathers undergo, as well as their diverging roles inherent in the parent-child dyad.

DISCUSSION AND CONCLUSIONS

The principal findings of this review reveal the unique circumstances that Chinese immigrant parents encounter when living in a culture that is different from their own. Parents face the challenges of retaining their own ethnic parenting values while adopting those of the host culture. There is evidence that this acculturative experience influences parenting efficacy and parental satisfaction. When viewed in the context of parent-child relationships, acculturation discrepancies between parents and children generate conflict within the family. Furthermore, substantial evidence supports the association between parent-child acculturation discrepancy and negative child adjustment and poorer mental health outcomes in these immigrant children.

The reviewed studies were limited in their examination of gender role in relation to acculturation and immigrant parenting, yet there is evidence that some aspects of acculturation and parent-child acculturation discrepancies are gender based. The findings in this review suggested that fathers undergo a different acculturative process and exert a different influence on child mental health outcomes than mothers. Unfortunately, the scarcity of research specifically examining Chinese immigrant fathers precluded a clear differentiation between

maternal and paternal acculturation and, especially, its influence on child outcomes. In general, it is widely recognized that fathers are underrepresented in parenting and family research, and many explanations have been proposed to explain the underrepresentation of fathers in the research arena (e.g., sexist conduct of research, family demographics suggesting less father engagement, and researcher's perceptions of fathers' unwillingness to participate in research; Phares, 1996). The knowledge disparity between Chinese immigrant fathers and mothers on parenting and acculturation ultimately limits the research and practical implications for these parents as a whole. Furthermore, there is evidence that acculturation and parenting in Chinese immigrants have varying implications for children of different genders. However, more research needs to be conducted to examine these differences.

Many of the studies reviewed had inherent methodological and design limitations that precluded further understanding of acculturation and its implications on parenting for Chinese immigrants. The cross-sectional nature of most studies limited the understanding of how acculturation, as a process, affects parenting. To date, only one longitudinal cohort study has been conducted to examine acculturation, parenting, and associated child outcomes in Chinese immigrants. Furthermore, small homogeneous convenience samples restricted the generalizability of findings. Importantly, the acculturation measures used were adapted from other cultures and not specifically normed for Chinese immigrants, thus diminishing the validity of findings. Finally, many of the studies reviewed relied on participants' self-reports, which may impart social desirability bias, and the use

of a single method (e.g., surveys and questionnaires), which may impart mono-method bias.

Relative to the body of literature examining other ethnic groups, research on acculturation and its influence on parenting in Chinese immigrants remains to be explored. Future research should focus on examining acculturation and its influence on parenting beliefs, attitudes, and practices, as well as parent-child relationships. Furthermore, longitudinal studies employing multiple methods should be conducted to validate the association between parent-child acculturation discrepancies and negative child outcomes. Gender-specific research should also be conducted to examine the differences between maternal and paternal roles, as well as their association with child outcomes in children of different genders. Lastly, culture-specific measures should be developed to accurately measure acculturation in Chinese immigrants.

The evidence presented in this review highlights the need for continued research in these areas to enhance our understanding of how acculturation affects parenting and parent-child relationships in Chinese immigrants. As the Chinese expatriate population continues to rise, many parents will face the challenges of parenting in a culture that is different from their own. The negative child outcomes related to parent-child acculturation discrepancies in Chinese immigrants underscore the need for a more comprehensive understanding of these relationships to appropriately address this problem.

NURSING IMPLICATIONS

Although psychologists and social scientists have traditionally dominated this area of research, the role of nursing in this area is beginning to emerge. From a holistic perspective, nursing care and practice extends beyond the individual and considers the social and contextual implications of disease and illnesses. As such, all matters that affect health and health care fall under the purview of nursing. Furthermore, parenting has long established its relevance to public health nursing, and building the links among the individual, the family, and the social environment has always been a noted strength in nursing practice and research.

As presented in this review, the dual challenges of acculturation and parenting in Chinese immigrant parents have shown to be associated with parental dissatisfaction and negative child adjustment and mental health outcomes. Nurses are at the unique junction to identify these problems through interfacing with individuals and families at the clinical and mental/community health levels. Nursing research in this area can propel the efforts to develop interventions and practices that help ameliorate acculturation discrepancies and prevent negative child outcomes associated with acculturation in immigrant families. As noted in their literature review on parenting and nursing, Gage, Everett, and Bullock (2006) found that nursing research on parenting, particularly across cultures and in the context of families, are not well developed. With decades of research from other disciplines, a problem has been identified that directly speaks to the work of nurses. Now is the perfect time to examine acculturation and parenting with a nursing science lens.

Figure 2.1 Flow Diagram of Article Selection Process

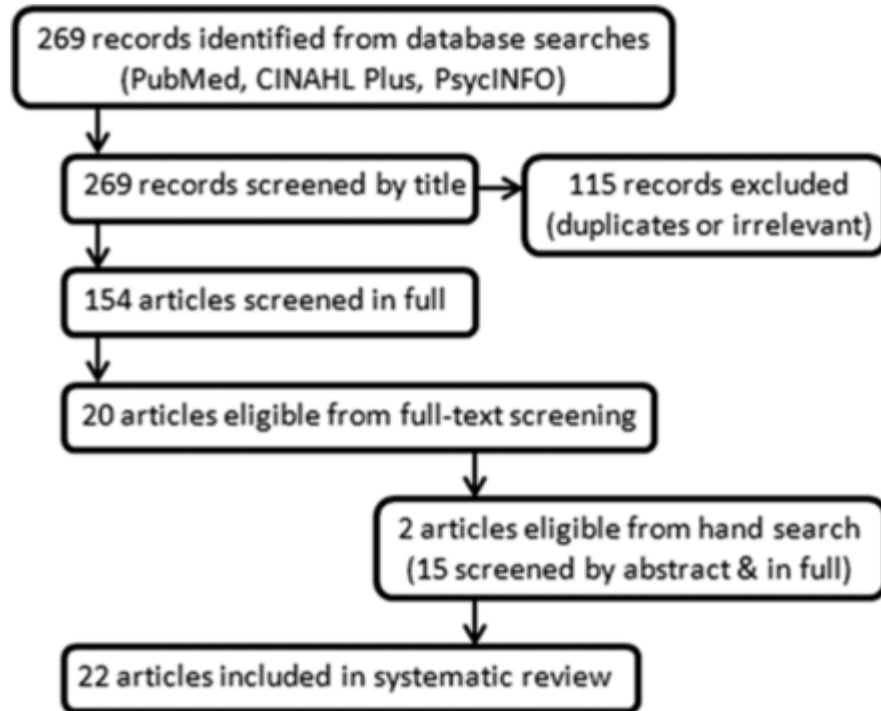


Table 2.1 Studies Examining Acculturation and Parenting in Chinese Immigrants

First Author (Year)	Host Country	Sample ^a and Demographics (Target Child Characteristics)	Design, ^b Data Collection, ^c and Measure of Acculturation
<i>Mothers only (n = 4)</i>			
Buki (2003)	U.S.	<i>N</i> = 95 mothers; average age, 42; all foreign born who migrated to the U.S. after age 16; average age at time of arrival, 28; average years of residency, 14; 94% married; 50% with undergraduate or graduate degree; 55% reported annual household income above \$50,000. (10-14 years old; male and female; 65% born in the U.S.)	Suinn-Lew Asian Self-Identity Acculturation Scale.
Chuang (2006)	Canada	<i>N</i> = 40 first-generation Taiwanese Canadian mothers; average age, 38.1; average years of residency, 29; average level of education, college degree; mean average household income, CAN\$35,000-50,000. (6-8 years old; male and female)	^b Mixed method. ^c Researcher-administered questionnaires, sorting task, semistructured interviews. Adapted Cultural Life Style Inventory.
Hulei (2006)	U.S.	<i>N</i> = 61 mothers (31 Chinese American, 30 European American); all Chinese American mothers were born in China; average age of Chinese American mothers, 39.29; minimum years of residency, 3; average years of residency, 10.63; average years of education, 16.87. (6-12 years old)	Suinn-Lew Asian Self-Identity Acculturation Scale.
Xu (2003)	U.S.	<i>N</i> = 138 mothers; 93.5% between 26 and 45 years of age; years of residency: 37% 1-5 years, 43% 6-11 years, 19.6% 12-18 years; 90.6% married; 83.4% had total family annual income of \$20,001-70,000. (1-18 years old; 90% between 1-12 years old; male and female)	Hispanic Stress Inventory.
<i>Mothers and fathers only (n = 4)</i>			
Chuang (2009)	Canada	<i>N</i> = 126 Chinese married parents (67 first-generation Chinese Canadian father-mother dyads and 59 Chinese father-mother dyads from Beijing); average years of residency, 3.78; average age of Chinese-Canadian fathers, 36.81; average age of Chinese Canadian mothers, 34.96; Chinese Canadian fathers had significantly higher levels of education than Chinese fathers; socioeconomic status similar in both samples. (1-year-old toddlers; male and female)	Adapted Cultural Life Style Inventory.
Costigan (2011)	Canada	<i>N</i> = 177 (92 mothers and 85 fathers), fathers—average age, 44.74; average years of residency, 6.99; 46.7% with university or graduate degrees; mothers—average age, 41.67; average years of residency, 6.73; 38.5% with university or graduate degrees. (10-14 years old; male and female; 81.5% born outside Canada)	Adapted Acculturation Rating Scale for Mexican Americans—Revised.
Duncan (2008)	U.S.	<i>N</i> = 12 father-mother dyads; 5 parents born within the U.S.; years of residency, 2 to 33; dual-wage earners with professional careers. (3-12 years old)	^b Qualitative (grounded theory). ^c Semistructured interviews examining the tensions present within attempt to adapt parenting style to new social context.

Table 2.1 (cont'd.) Studies Examining Acculturation and Parenting in Chinese Immigrants

Lau (2010)	U.S.	<i>N</i> = 107 parents (88.6% mothers); average years of residency, 17.3; 71% married; median average annual household income between \$20,000 and \$25,000; 43.2% with college, vocational, or professional degrees. (9-16 years old; male and female; 72.9% born in the U.S.)	^c Surveyed via audio-computer-assisted structured interviews. Societal Attitudinal Familial Environmental Acculturative Stress Scale. Asian Value Survey. Asian American Family Conflict Scale.
<i>Mothers and children only (n = 3)</i>			
Tardif (2006)	Canada	<i>N</i> = 164 Chinese Canadian mother-child dyads and 30 Anglo-Canadian mother-child dyad; all emigrated from mainland China within previous 6 years; average mothers' age, 42.11; 89.7% married and living with spouse; Chinese Canadian sample reported more university education than Anglo-Canadian sample; mean age at time of migration, 38.8. (13-15 years old; male and female; mean age at time of immigration, 11)	Behavioral Acculturation Scale. York Measure of Ethnic Identification.
Hwang (2010)	U.S.	<i>N</i> = 105 mother-child dyads; only information on mothers is their place of birth (38% Taiwan, 32% China, 12% Hong Kong, 5% Vietnam, 4% Burma, 2% Thailand). (14-18 years old; male and female; 51% born in the U.S.; average length of residency for foreign born students, 7.04 years)	Acculturative Family Distancing Scale. Vancouver Index of Acculturation.
Lim (2009)	U.S.	^a Purposive sample. <i>N</i> = 81 mother-youth pairs; average years of residency, 19.1; 55.1% had more than a high school education; average age 46.7; 88.9% first-generation immigrants. (12-23 years old; male and female; average years of residency, 11.6; 58% second generation, 35.8% first generation)	Suinn-Lew Asian Self-Identity Scale.
<i>Mothers, fathers, and children (n = 11)</i>			
Juang (2007)	U.S.	<i>N</i> = 166 parent-child dyads (70% mothers); mean age, 45.81; 84% first generation, 10% second generation, 2% third or later generation; average years of residency for first generation, 17.11; average level of education is high school. (13-17 years old; male and female; 61% born second generation, 31% first generation, 7% third or later generation; average years of residency for first generation, 5.65)	Generational status (first, second, or later generation).
Liu ^d (2009)	U.S.	<i>N</i> = 444 Chinese American adolescents along with 408 of their mothers and 382 of their fathers; fathers—87% immigrants; average years of residency, 17.46; mothers—90% immigrants; average years of residency, 15.74; average family income, US\$30,001-\$45,000 (lower socioeconomic status). (12-15 years old; male and female; 75% born in the U.S.)	Vancouver Index of Acculturation.
Kim ^d (2009)	U.S.	<i>N</i> = 388 father-adolescent dyads and 399 mother-adolescent dyads; all parents were born outside the U.S.; average family income, \$30,001-\$45,000; average education, high school or higher. (12-15 years old; male and female)	Vancouver Index of Acculturation.

Table 2.1 (cont'd.) Studies Examining Acculturation and Parenting in Chinese Immigrants

Crane (2005)	U.S. and Canada	<i>N</i> = 41 adolescents of Chinese descent and their parents; all parents born and raised outside North America; average years of education, 17.15 for fathers and 16.17 for mothers; average age, 47.2 for fathers and 43.3 for mothers; 100% married. (12-19 years old; 64% born in the U.S.)	Suinn-Lew Asian Self-Identity Acculturation Scale.
Costigan (2004)	Canada	<i>N</i> = 96 families of Chinese origin in Canada (mothers, fathers, and one child from each family); all parents born outside Canada; average age is 44.88 for fathers and 41.84 for mothers; average years of residency is 9.16 for fathers and 7.70 for mothers; 61.5% of fathers earned university degree or higher, compared to 36.9% of mothers. (average age, 11.86; 75% born outside Canada; 25% born in Canada)	Adapted Acculturation Rating Scale of Mexican Americans—Revised. Affirmation and Belonging subscale of Multigroup Ethnic Identity Measure. Asian Value Scale.
Costigan (2006a)	Canada	<i>N</i> = 271 individuals (89 fathers, 91 mothers, 91 children) from 91 two-parent immigrant Chinese families; all parents were born outside Canada; average age 44.91 for fathers and 41.96 for mothers; average age at time of immigration 37.42 for fathers and 35.40 for mothers; average years of residency 7.66 for fathers and 4.85 for mothers. (9-15 years old; male and female)	Adapted Acculturation Rating Scale for Mexican Americans—II. Asian Value Scale.
Costigan (2006b)	Canada	<i>N</i> = 88 ethnically Chinese families residing in Canada; all parents born outside Canada and migrated after age 20; average age, 44.80 for fathers and 42 for mothers; average years of residency, 7.04 for fathers and 6.59 for mothers. (average age, 11.89; male and female; 81.8% born outside Canada; average years of residency, 4.88)	^b Secondary data analysis of Costigan (2004). Adapted Acculturation Rating Scale of Mexican Americans—Revised. Affirmation and Belonging subscale of Multigroup Ethnic Identity Measure. Asian Value Scale.
Weaver ^d (2008)	U.S.	<i>N</i> = 451 Chinese American families; 87% of fathers and 90% of mothers born outside the U.S.; mean age at time of immigration, 30.45 for fathers and 28.30 for mothers; average years of residency, 17.46 for fathers and 15.74 for mothers; 63.1% of fathers and 68.4% of mothers reported high school or higher education; median family annual income, \$30,001-\$45,000. (average age, 13 at Time 1 and 17.05 at Time 2; 75% born in U.S.; 85% resided with both parents)	^b Longitudinal, 4-year follow-up. Vancouver Index of Acculturation. Fuligni and colleagues' 12-item version of Importance of Family Obligations Scale.
Fung (2010)	U.S.	<i>N</i> = 107 parent-child dyads (89.7% mothers); 37 families referred from Child Protective Services, 33 from community mental health and social service agencies, 37 from community schools; average years of residency, 17.3. (9-17 years old; male and female)	^c ACASI for parents. Face-to-face interviews with children. Asian American Family Conflict Scale. Societal Attitudinal Familial Environmental Acculturative Stress Scale. General Ethnicity Questionnaire. Asian Value Scale. Modified Acculturation Scale of Vietnamese.
Wang ^d (2012)	U.S.	<i>N</i> = 201 Chinese immigrant families at Wave 1, 183 at Wave 2; all parents born outside U.S.; median family income, \$30,001-\$45,000 at Wave 1 and \$45,001-\$60,000 at Wave 2; median education level, high school graduate for fathers and mothers.. (average age, 13 at Wave 1 and 17 at Wave 2; male and female)	^b Longitudinal, 4-year follow-up. Vancouver Index of Acculturation.

Table 2.1 (cont'd.) Studies Examining Acculturation and Parenting in Chinese Immigrants

S. Y. Kim ^d (2013)	U.S.	<i>N</i> = 279 Chinese American families; all parents born outside U.S.; median family income was \$30,001-\$45,000; 29.8% of fathers and 25.2% of mothers had more than high school education. (average age, 13.04 at Wave 1 and 17.04 at Wave 2; male and female)	^b Longitudinal, 4-year follow-up. Vancouver Index of Acculturation.
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- a. All studies used a convenience sample unless noted otherwise.
b. All studies used a cross-sectional design unless noted otherwise.
c. All studies used self-administered questionnaires unless noted otherwise.
d. Data from the same study.

Table 2.2 Results of Systematic Review by Study Focus

First Author (Year)	Major Findings Related to Acculturation and Parenting	Study Limitations
<i>Focus 1: Acculturation and its influence on Chinese immigrants' parenting beliefs, attitudes, and practices (n = 7)</i>		
Chuang (2009)	<ul style="list-style-type: none"> Chinese parents held stronger authoritarian beliefs, whereas Chinese Canadian parents more likely to endorse authoritative beliefs Fathers' level of acculturation/years of residency did not significantly influence their parenting attitudes More acculturated Chinese Canadian mothers less likely to endorse authoritative behaviors 	<ul style="list-style-type: none"> Small sample groups Limited generalizability—both groups educated and middle class Acculturation assessment instruments unidimensional and linear
Costigan (2011)	<ul style="list-style-type: none"> Higher involvement in Canadian culture associated with stronger feelings of parenting efficacy, which is related to better psychological adjustment and more positive parenting Parents' orientation toward Chinese culture largely unrelated to feelings of parenting efficacy or adjustment—except mothers with higher Chinese orientation reported more positive psychological adjustment 	<ul style="list-style-type: none"> Based on correlational data Findings based on parent reports of parenting practices Target child's age (10-14) may present additional variation in parents' reports of parenting efficacy as children begin to exert their independence at early adolescence
Chuang (2006)	<ul style="list-style-type: none"> Few acculturation differences found in parental control to issues of children's personal freedom in everyday situations Taiwanese mothers and Euro-American counterparts made similar domain distinctions—moral and social conventional events under parents' authority, personal events primarily seen within child's authority More acculturated mothers believed that sons should make decisions about their daily routines; less acculturated mothers supported daughters' decisions more on homework issues 	<ul style="list-style-type: none"> Small sample Recruitment based on mothers' maintenance of ties to Chinese/Taiwanese community (e.g., recruitment from Chinese churches)
Hulei (2006)	<ul style="list-style-type: none"> No significant relationship between verbosity or laxness and acculturation level/years of residency Acculturation may contribute to everyday life, but parenting remains culturally rooted Positive relationship between acculturation and years of residency 	<ul style="list-style-type: none"> Measurements used (Parenting Scale and CBCL) based on European American values Reliance on maternal report to assess maternal discipline behaviors and child behavior problems Social desirability bias as mothers were interviewed by researcher
Xu (2003)	<ul style="list-style-type: none"> Years of residency slightly buffered some parenting acculturation stressors Older children associated with greater acculturation pressures for mothers, which result in mothers experiencing less satisfaction with parent-child relationship and parenting performance Parenting, marital, and immigration acculturation stressors were most consistent predictors of dissatisfaction 	<ul style="list-style-type: none"> Volunteers and self-selected sample Mothers predominantly married and well educated Data collected through questionnaires (qualitative may have elicited more variations) Questionnaires not specifically designed for Chinese immigrants

Table 2.2 (cont'd.) Results of Systematic Review by Study Focus

Duncan (2008)	<ul style="list-style-type: none"> • Parents ritualize expression of love and affection because they want their child to have the same experience as peers in the American culture • Parents caught in the tension of differentiation and tradition • Ambivalence toward how to blend both cultures • Assimilation and retention of traditional values not mutually exclusive 	<ul style="list-style-type: none"> • No limitations cited in study • Participant characteristics were not presented, thus limiting transferability • No outline of how trustworthiness was ensured • Description of analysis limited
Lau (2010)	<ul style="list-style-type: none"> • No significant correlation between physical discipline and acculturative stress, firm control values, or acculturation conflict • Child school problems related to parental acculturative stress • Acculturation conflicts only related to use of physical discipline in families where parents strongly valued strict control 	<ul style="list-style-type: none"> • Cross-sectional data • Self-report of physical discipline is subject to social desirability bias, and parents generally underreport these behaviors (parents also informed that disclosure of child abuse could result in Child Protective Service report) • Sample not generalizable (mostly low income)
<i>Focus 2: Differences in acculturation between Chinese immigrant parents and children (n = 4)</i>		
Buki (2003)	<ul style="list-style-type: none"> • Mothers reported lower levels of acculturation for themselves than their children and larger acculturation gap and more uncertainty with sons than daughters • Larger acculturation gap associated with more perceived parenting challenges, less satisfaction, and more uncertainty • Mothers with more formal education reported less acculturation gap 	<ul style="list-style-type: none"> • Child's level of acculturation based on mother's perception • Acculturation gaps measured with child whom the mother perceived that she had the most conflict with • Other potential biases may be in play (e.g., stress) • Some mothers answered questionnaires with investigator present • Suinn-Lew Asian Self-Identity Acculturation Scale and PSI not normed on Chinese immigrants
Tardif (2006)	<ul style="list-style-type: none"> • Mothers in high-acculturation disparity groups reported significantly more conflicts than low-acculturation disparity groups • Low-acculturation disparity groups (low acculturation in child and mother) reported more intense conflicts with sons than daughters • High-acculturation disparity groups had conflicts that were interpersonal, whereas low-acculturation disparity groups had conflicts regarding daily activities and chores • All mothers endorsed more power assertive behaviors with sons than daughters 	<ul style="list-style-type: none"> • Self-report measures did not allow researchers to determine how and by whom conflicts were initiated, expressed, and resolved; fathers were not included; measures not specifically normed on Chinese immigrants
Costigan (2004)	<ul style="list-style-type: none"> • Fathers and children largely supported orthogonal model of acculturation • Mothers supported linear model • Canadian-born children with greater Canadian orientation were associated with stronger endorsement of Chinese identities and values 	<ul style="list-style-type: none"> • Age range of children restricted to early adolescence (not generalizable to older children) • Sample predominantly first-generation voluntary immigrants • Cross-sectional data • Assessed fathers, mothers, and children at the group level—may reveal more if analyzed as a family unit

Table 2.2 (cont'd.) Results of Systematic Review by Study Focus

Costigan (2006b)	<ul style="list-style-type: none"> • Children and mother reported stronger feelings of belonging to Chinese identity than fathers • Children more oriented to the Canadian culture than either parents • Fathers and mothers' acculturation were significantly different in 4/5 acculturation domains • Parent-child acculturation discrepancies higher in host than ethnic dimension • Parent-child congruencies were higher in private domains (values and beliefs) than public domains (behavior) for both cultural orientations • Families with longer residencies had higher discrepancies 	<ul style="list-style-type: none"> • Sample of relatively recent and voluntary immigrants restrict generalizability; sample recruited from area with high concentration of Chinese individuals; cross-sectional does not inform how this changes over time
<i>Focus 3: Acculturation, parenting, and child adjustment/mental health outcomes in Chinese immigrants (n = 11)</i>		
Juang (2007)	<ul style="list-style-type: none"> • First-generation adolescents reported more endorsement of parental control than subsequent generations • Greater parent-adolescent discrepancies in parental control related to higher adolescent depressive symptoms, which is also mediated by family conflict • Some adolescents were more traditional than their parents (endorsed more parental control) 	<ul style="list-style-type: none"> • Age group may not be appropriate (Asian Americans at higher risk of depression during late, not early, adolescence) • Most data came from mothers (limiting generalizability to both parents) • Only used survey data • Did not measure surrounding context of adolescents
Liu (2009)	<ul style="list-style-type: none"> • Mothers who are more acculturated toward American culture report lower levels of conduct problems in their adolescents, lower use of harsh discipline, and higher monitoring • Paternal acculturation related to higher monitoring only and did not relate to conduct problems • Maternal acculturation play a bigger role in adolescent conduct problems 	<ul style="list-style-type: none"> • Families from areas with high density of Chinese population • Ratings of acculturation attitudes may not have comprehensively assessed the most relevant domains of acculturation • Parental monitoring assessed by parents' knowledge of child activities rather than actual monitoring behaviors • Cross-sectional data
S. Y. Kim (2009)	<ul style="list-style-type: none"> • Higher discrepancies in acculturation levels associated with unsupportive parenting practices, which result in more adolescent depressive symptoms • Parenting functions serve only as mediator for American orientation discrepancy and adolescent depressive symptoms in father-child dyads 	<ul style="list-style-type: none"> • Cross-sectional data • Acculturation level of fathers, mothers, and children analyzed in aggregate instead of family unit
Hwang (2010)	<ul style="list-style-type: none"> • Larger mother-youth heritage enculturation gaps associated with higher mother and youth report of acculturative family distancing problems • Retention of heritage culture serves as protective factor to improve acculturative family distancing • Greater youth and mother reports of acculturative family distancing associated with higher depressive symptoms and risk 	<ul style="list-style-type: none"> • Cross-sectional data • Data collected on subsample of high school students at a single school • Small sample size • Self-report (findings were cross-informant, not based on dyads)

Table 2.2 (cont'd.) Results of Systematic Review by Study Focus

Crane (2005)	<ul style="list-style-type: none"> • Acculturation differences between parents and adolescents appear to be a strong predictor of depression (more than family functioning) • Acculturation differences did not significantly predict delinquency 	<ul style="list-style-type: none"> • Small convenient sample • Cross-sectional cannot make causal or directional inferences • Did not analyze fathers and mothers separately
Costigan (2006a)	<ul style="list-style-type: none"> • Parents' level of engagement in Chinese culture played important role in predicting child adjustment, whereas engagement in Canadian culture did not (note that discrepancies in Canadian orientation greater than in Chinese orientation) • When mothers report high level of Chinese behaviors, low level of Chinese behaviors in child associated with poorer adjustment • When fathers report high endorsement of Chinese values, low levels in child associated with higher levels of conflict intensity and depression 	<ul style="list-style-type: none"> • Small sample size • No subgroup analysis (e.g., different Chinese origins) • Children age (early adolescent) restricted identification of depressive symptoms • Cross-sectional data (no causal inferences)
Weaver (2008)	<ul style="list-style-type: none"> • Bicultural mother-adolescent dyads exhibited greatest supportive parenting than any dyad groups where mothers were more Chinese • Bicultural father-adolescent dyads exhibited greatest supportive parenting than bicultural father and American-oriented child • Child with bicultural orientation received more supportive parenting • Supportive parenting associated with lower concurrent depressive symptoms but not associated with longitudinal change • American-oriented child with Chinese-oriented parents had least supportive parenting and highest depressive symptoms 	<ul style="list-style-type: none"> • Did not quantify degree of parent-child differences in cultural orientation • Small dyad samples, could not study in triads • Sample primarily low socioeconomic status • Assumes the relationship between supportive parenting and depression not mediated by child's cultural orientation
Fung (2010)	<ul style="list-style-type: none"> • Children reported higher levels of child internalizing behaviors and parental verbal and physical punitive behaviors than parents but no difference in externalizing behaviors • Acculturation-related conflicts related to more disagreement in parental verbally punitive behaviors and child internalizing and externalizing problems • Parental acculturative stress and parent-child acculturation discrepancy were related to disagreements in child internalizing problems (namely, parents' underreporting) • No significant effects of either parent or youth acculturation to American culture in predicting child and parenting problems 	<ul style="list-style-type: none"> • Cross sectional • Sample not representative of immigrant Chinese American population (majority referred by Child Protective Service) • Study relied on translations of measures, lacking data on validity and reliability • Difference in parent and child report of internalizing behaviors was statistically significant (less than 4 raw score points) but may not be clinically significant
Lim (2009)	<ul style="list-style-type: none"> • Youth less acculturated than their mothers were more likely to experience distress (depressive and psychological symptoms), whereas those more acculturated than their mothers did not experience greater distress 	<ul style="list-style-type: none"> • Did not include externalizing symptomatology • Cross-sectional data • Sample from large urban areas with significant proportion of Chinese Americans • Children aged 12-23 years

Table 2.2 (cont'd.) Results of Systematic Review by Study Focus

Wang (2012)	<ul style="list-style-type: none"> • High level of parent-child acculturation discrepancy related to adolescent perceptions of less parental knowledge, which is related to adolescents having more contact with deviant peers, which leads to more adolescent delinquency • High parent-child acculturation discrepancy at early adolescence is related to compromised parental knowledge at middle adolescence • High level of parental knowledge at early adolescence is related to less contact with deviant peers at middle adolescence • All mediating pathways were significant concurrently and longitudinally • Slightly more father-adolescent dyads with higher acculturation discrepancy than mother-adolescent dyads 	<ul style="list-style-type: none"> • Single-parent families excluded from the sample • Low participation rate • Long gap between data collection waves (4 years) • Could not compare model parameters between families with different parent-child acculturation discrepancy directions • Assumed high level of parental knowledge and low level of adolescent delinquency are adaptive
S. Y. Kim (2013)	<ul style="list-style-type: none"> • High parent-child acculturation discrepancy in American orientation related to more depressive symptoms and lower academic performance, which was mediated by parents' use of unsupportive parenting and increased sense of alienation between parents and children • Patterns of maladjustment established in early adolescence persisted into middle adolescence and more significant in father-adolescent dyads • Parent-child acculturation discrepancy in Chinese orientation not related to depressive symptoms or academic performance 	<ul style="list-style-type: none"> • Data collected from areas with dense Chinese immigrant population • Low participation rate • Cannot pinpoint developmental period most amenable to intervention • Long gap between data collection waves (4 years)—some data dropped because it was collected a year before Wave 2 • Did not take into account peer group influence in children

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CHAPTER THREE: METHODOLOGY

This descriptive cross-sectional study used Q-methodology to examine perceptions of physical discipline (PD) and its differentiation from child physical abuse (CPA) among Chinese American mothers and pediatric nurses. Further, the influence of acculturation on PD and CPA differentiation among Chinese American mothers were explored. The methodology used to guide this study is described below.

RESEARCH DESIGN

Q-Methodology

Q-methodology was developed by William Stephenson to empirically study human subjectivity (Stephenson, 1935). This method is based on the assumptions that subjectivity is both communicable and self-referent (McKeown & Thomas, 2013). While prevailing quantitative studies of subjectivities (e.g. attitudes, opinions, and viewpoints) employ R-methodology (e.g. use of Likert-type surveys), which investigate phenomena based on theoretical formulations and use scales to measure constructs that are operationalized by the researcher (Dennis, 1986), Q-methodology allows research participants to create their own meanings that bear on their internal frames of reference through the operational medium of a Q-sort (McKeown & Thomas, 2013).

A Q-study is traditionally performed in two sequential phases: (1) Creating a Q-sample, and (2) Q-sorting and analysis. Of note, the statistical analysis in Q-methodology also differs from R-methodology. While R-methodology uses ordinary

factor analysis to examine the correlation between different traits, variables, or statements, Q-methodology uses by-person factor analysis to examine the correlation between Q-sorts to identify common viewpoints among participants (Akhtar-Danesh, Baumann, & Cordingley, 2008). Q-methodology enables the systematic exploration of a variety of viewpoints about an issue, the identification of key areas that overlap or differ, and the examination of different characteristics of people who have similar or opposing views (Akhtar-Danesh, et al., 2008). It also allows for exploring and explaining patterns in subjectivities, and generating new ideas and hypotheses (van Excel & de Graff, 2005). Importantly, the objective of Q-methodology is to sample the range and diversity of viewpoints, not the proportion of individuals endorsing each specific viewpoint (Cross, 2005). Therefore, the person-sample size requirement for Q-studies are comparatively smaller than traditional quantitative studies, where 40 to 60 participants are considered more than adequate to elicit prevailing viewpoints (Brown, 1980).

For an in-depth discussion on using traditional R-methodology (i.e. Likert scales) versus Q-methodology to examine perceptions and attitudes in nursing research, see *Manuscript 2*.

SUBJECTS AND SETTINGS

Target population 1: Chinese American mothers

Mothers who self-identified as Chinese descent and have at least one biological child between the ages of 3 and 6 (i.e. preschool-age) were eligible for this study. This study only included mothers because evidence suggests Chinese

American mothers and fathers follow different models of acculturation (Costigan & Su, 2004). The child age range was selected based on national data showing that physical discipline (PD) use peaks for children in this age bracket (Straus & Stewart, 1999; Zolotor, Theodore, Runyan, Chang, & Laskey, 2011). Importantly, children in this age range remain predominantly socialized within the family, which precludes acculturation discrepancies that occur as children mature and become more influenced by peers and other Western institutions outside the home. Mothers of children with significant developmental disabilities or chronic illnesses that require more than one hospitalization in the past year (per parent report) were excluded.

These mothers were initially recruited from Howard and Montgomery Counties, Maryland, which have the highest Asian American population in Maryland (14.4% and 13.9% respectively, compared to 5.5% in Maryland at large; U.S. Census Bureau, 2010). Additional participants were recruited from Baltimore County and Baltimore City, Maryland. Recruitment sites included Chinese language schools, Chinese churches, and Asian grocery stores. The study was advertised by posting flyers at these sites. Parents who were interested contacted the investigator directly by phone or email. Convenience and snowball sampling were used for initial recruitment, and proportional quota sampling based on generational status (1st and $\geq 2^{\text{nd}}$ generation, i.e. foreign- and US-born) were employed as a proxy to promote variability in acculturation. All participants from this target population received a \$25 USD gift card to a local merchant as an honorarium.

In Phase 1 of the study, 6 foreign-born and 5 US-born Chinese American mothers who met the eligibility criteria were interviewed over the phone using

semi-structured interviews. Recruitment for Phase 1 of the study was complete when informational redundancy was reached (i.e. when participants no longer elicited new information; Sandelowski, 1995). A separate sample of mothers was recruited for Phase 2. In Phase 2, 20 foreign-born and 15 US-born Chinese American mothers meeting eligibility criteria met with the researcher in person and completed a paper-based Q-sort, an acculturation measure, and a demographic questionnaire. Participants were also asked to talk briefly about their overall perceptions on differentiating PD from abuse after they completed the sort.

Target population 2: Pediatric nurses

Mandated reporters of child abuse who were pediatric nurses at Johns Hopkins Hospital in Baltimore, Maryland were recruited using convenience and snowball sampling. Nurses were eligible if they have worked in the pediatric field for a minimum of 2 years, as evidence suggests a relationship between professional experience and reporters' suspicion and intention to report CPA (Hansen, Bumby, Lundquist, Chandler, Le, & Futa, 1997). The study was advertised by posting flyers at break rooms and report rooms on the hospital's pediatric units. The flyers clearly stated the inclusion criteria for the study, and nurses who wanted to participate directly entered the study website provided on these flyers. Forty-eight nurses performed a Q-sort and completed a simple, de-identified demographic questionnaire online. Upon completion, participants were instructed to provide their email address if they wished to receive a \$25 online gift card.

DATA COLLECTION AND ANALYSIS

Study Phase 1: Creating a Q-Sample.

A Q-sample is a clear and representative collection of stimulus items (or statements) on the topic of study (Akhtar-Danesh et al., 2008), which can be “naturalistic” (i.e. taken from interviewing participants) or “ready-made” (i.e. drawn from sources other than participants’ own communications; McKeown & Thomas, 2013). All information elicited to create the Q-sample is known as a “concourse,” which is the communicable meaning surrounding the topic that contains all relevant aspects of that topic (Brown, 1993).

From the concourse, stimulus items can be extracted through “structured” or “unstructured” approaches. The structured approach uses a matrix to inductively (i.e. drawn from statements from the concourse) or deductively (i.e. based on a prior hypothetical or theoretical considerations) create domains that guide proportionate sampling of stimulus items; in the unstructured approach, all stimulus items assumed to be relevant to the topic are extracted from the concourse (McKeown & Thomas, 2013). The Q-sample ideally has 40-80 stimulus items (Watts & Stenner, 2005), and a minimum of 20 items (Akhtar-Danesh et al., 2008).

Data Collection and Management

Between December 2012 and February 2013, the investigator conducted semi-structured interviews with 11 eligible Chinese American mothers (i.e. 6 foreign-born and 5 US-born generation) to elicit information on their general perceptions of PD, as well as discipline behaviors that may range from PD to CPA

according to an interview guide. Child behavior vignettes were used to help elicit diverse discipline behaviors. Each interview was audio-recorded and lasted approximately 20-60 minutes. Interviews were conducted in English, Mandarin, or Cantonese Chinese, depending on the participant's language of preference. The investigator is a native speaker of all three languages.

Analysis

Audio-recorded interviews were transcribed verbatim by certified transcriptionists and the interviews conducted in a Chinese language were translated into English by a certified translator prior to analysis. Data were analyzed using QSR International's NVivo 9 qualitative data analysis software.

A naturalistic, structured, inductive approach was used to extract stimulus items (i.e. specific discipline behaviors) directly from this concourse to generate statements for subsequent sorting. This approach is advantageous for three reasons: (1) the Q-sample will mirror the opinions of people who will perform the Q-sort, (2) it expedites the sorting process and attributions of meaning since items are based upon participants' own communications, and (3) it will ensure more proportionate sampling of stimulus items from different domains (McKeown & Thomas, 2013).

The statements were selected based on clarity and relevance, and broadly fell under 5 domains: (1) Intention, (2) Pattern of use, (3) Specific behaviors, (4) Delivery, and (5) Outcome. Some domains were further divided into subdomains and some statements may fall under more than one domain. The Q-sample and statements domains are described in *Manuscript 3*. The statements and their respective domain(s)/subdomain are depicted in Figure 3.1.

The Q-sample was pilot tested by a parenting and child mental health expert and a forensic nursing expert to assess balance, appropriateness, simplicity, and applicability (Cross, 2005), and to assure inclusiveness of statements and related domains. Then, each statement was translated between English and Chinese to assure translational equivalence for subsequent sorting. Each statements was assigned a random number between 1 and 71 to unique identify the item (i.e. statement) for subsequent analysis (see *Final Q-sample* in Appendix A).

Study Phase 2: Q-Sorting and Analysis.

In Q-sorting, a participant ranks and assigns a collection of test stimuli (i.e. the Q-sample) on a Q-sort continuum defined by a condition of instruction (McKeown & Thomas, 2013). The condition of instruction tells the participant how to sort the Q-sample, which may be a simple request of agreement and disagreement, or elicit operationalizations of theoretical constructs by assessing participants' levels of agreement to test stimuli describing that construct (McKeown & Thomas, 2013).

The Q-sort continuum uses an “inverted, quasi-normal distribution” (McKeown & Thomas, 2013) that restricts the number of test stimuli a participant can place under each rank along the continuum. This is a particular advantage of Q-methodology, which employs a “forced-free” technique that forces participants to assign meaning and make fine discriminations between test stimuli while allowing participants to freely decide the rank of each test stimulus in comparison to the others (McKeown & Thomas, 2013). This technique avoids response-set biases common in Likert-type surveys of subjectivity (i.e. extreme response set bias or

acquiescence response set bias). Also, it bypasses some social desirability bias because participants are forced to rank all test stimuli in relation to one another based on a predefined schema (i.e. the Q-sort continuum).

The decision to force items to fit within a normal distribution has been controversial. Some studies have shown that the correspondence between the forced (i.e. restricted number of items under each rank) and unforced (i.e. no restriction on number of items under each rank) approaches is high (Block, 1956). However, the forced approach receives some important criticisms, which include: the possibility of losing information that may otherwise be obtained with the unforced approach (Cronbach & Gleser, 1953), its limited ability to accommodate tied preferences (Gordon & Kikuchi, 1970), and its negative effects on participant motivation by destroying the spontaneity of the task (i.e. forcing participants to count cards; Gaito, 1962).

In contrast, Block (1956) argues that the forced approach is appropriate in Q-sorting because (1) it standardizes and maximizes the number of discriminations each participant has to make when ranking each stimulus item in comparison to the others, (2) the forced approach is associated with equal or great reproducibility (i.e. stability) than the unforced approach, and (3) no information will be lost if the Q-sample is balanced and well-structured (i.e. a Q-sample that encompasses all topics of the concourse and has a broad distribution of stimulus items).

Also, the possibility of discriminations being “forced” rather than “real” (i.e. participants forced to rank items differently due to space; Block 1956) may be eliminated by carefully selecting the kurtosis of the distribution (i.e. more

discriminations will require a flatter distribution; van Exel & de Graff, 2005). Lastly, despite being an intensive exercise, Q-sorters often indicate that they enjoy the process and the chance to reflect on the topic of study as they visually inspect their finalized Q-sorts (van Exel & de Graff, 2005). Supported by the principle of parsimony and the evidence that the forced approach is at least equal, if not superior to the unforced approach, the forced approach will be used in this proposed study.

The conventional procedures to Q-sorting include: (1) read through all stimulus items to get an overall impression, (2) separate the stimuli into three piles – agree, neutral, and disagree, and (3) proceed to distribute stimulus items along the Q-sort continuum (McKeown & Thomas, 2013). On average, it takes a participant 30 to 60 minutes to perform a 50-item Q-sort (Akhtar-Danesh et al., 2008).

Data Collection and Management

Chinese American Mothers. Between August 2013 and February 2014, 35 Chinese American mothers (20 foreign-born and 15 US-born) met with the investigator in person and completed a demographic questionnaire, an acculturation measure, and a paper-based Q-sort using the Q-sample elicited in Phase 1. During Q-sorting, a condition of instruction was clearly printed above the Q-sort continuum, which read,

“There are 71 statements related to either the behavior or the outcome of punishing a child. Please sort the statements based on what you think are most unacceptable to most acceptable parenting behaviors when punishing a child between 3-6 years old.”

The condition of instruction was printed in both English and Chinese. The Q-sample was presented in a deck of cards, and one stimulus item was printed on each card in both English and Chinese. A 13-point Q-sort continuum was displayed on a large poster paper, ranging from “Most Unacceptable, -6” to “Most Acceptable, +6”. The number of ranks along the continuum and the kurtosis of the distribution (i.e. the number of stimulus items allowable under each rank) was selected based on the size and characteristic of the Q-sample (Akhtar-Danesh, et al., 2008; van Exel & de Graff, 2005).

The investigator explained the Q-sort procedures to the participants using a “Sorting Instructions” script. Participants were assured they could take as much time as they need and were free to redistribute their stimulus items at any point. The investigator checked each Q-sort for completion and recorded the sort by taking a photograph of it. These participants were also asked to briefly explain how they differentiated the statements from acceptable and unacceptable, and how they felt about the sorting process.

After the sorting procedure, the mothers completed a demographic questionnaire and acculturation measure by paper and pencil. The demographic questionnaire elicited data on maternal age, marital status, generational status, family origin (e.g. China, Taiwan, Hong Kong, etc.), years residing in the US, number of children and their respective ages, and the number of people currently living in their household.

The 26-item Suinn-Lew Asian Self-Identity Acculturation Scale (SL-ASIA; Suinn, Rickard-Figueroa, Lew, & Vigil, 1987) was used to assess linear and

orthogonal levels of acculturation. A well-validated, translated version of this instrument was available in English and Chinese. The reliability of SL-ASIA in Chinese Americans is high, with Cronbach's alphas ranging from 0.87 to 0.90 (Ponterotto, Baluch, & Carielli, 1998). It was also found to have strong and consistent convergent-related validity, and acceptable construct validity (Ponterotto, Baluch, & Carielli, 1998).

Pediatric Nurses. In September 2014, 48 pediatric nurses completed a Q-sort and a demographic and nursing background questionnaire online using the internet application, FlashQ (Hackert & Braehler, 2007). Although their mode of sorting (i.e. online) is less common, previous studies have shown that computer-proficient participants are comfortable with and prefer computer- over paper-based sorting (Reber, Kaufman, & Cropp, 2000). Also, computer-based Q-sorts require less instruction and explanation, which may be attributed to sort-prompting.

Pediatric nurses entered the study website via a web link printed on the study flyers. The online sorting procedures were equivalent to paper-based sorting, using a drag-and-drop interface and along a 13-point Q-sort continuum. The condition of instruction asked the pediatric nurses to sort the statements from most unacceptable to most acceptable when used to punish a child between ages 3 and 6 based on their professional opinion as mandated reporters of child abuse. Prior to each sorting step, a text box with instructions and explanations for the task prompted the nurses on how to proceed.

After the Q-sort, pediatric nurses filled out a demographic and nursing background questionnaire, which inquired about their sex, age, current job position

(e.g. registered nurse, nurse practitioner, etc.), highest nursing degree obtained, years of pediatric nursing experience, if they have ever received child abuse training, if they have any children, and their race/ethnicity. They were also asked to briefly describe why the statements they placed at the extreme ends of the continuum were “Most Acceptable” or “Most Unacceptable” when used to punish a child. Individual Q-sorts and responses to the questionnaire were immediately forwarded to the investigator via e-mail. Only the investigator had access to this data.

Phase 2 study instruments, including the 13-point Q-sort continuum with condition of instruction, a full list of translated sorting statements (Q-sample), and demographic forms are included in *Appendix A*.

Analysis by Specific Aim

Descriptive and inferential statistics were analyzed using Stata®12 (StataCorp, 2011). PQMethod 2.33 (Schmolck, 2013) was used to analyze Q-sorts using by-person factor analysis. Because there is no single, objective way to identify the best factor solution in Q-studies (i.e. the optimal solution to grouping participants; Watts & Stenner, 2012), different methods and vantage points may be used to assess the best solution to describe the different viewpoints (Cairns, 2013), and multiple iterations of different factor structures were explored prior to selecting a terminal solution.

The data reduction technique, by-person factor analysis, is used to generate groups of participants who performed similarly on their Q-sorts. The centroid extraction method is commonly used in by-person factor analysis, and is considered

superior to other types of extraction methods in Q-methodology because it provides more flexibility to explore the data through judgmental (i.e. manual) factor rotation (Watts & Stenner, 2012). However, results using the centroid method is generally comparable to other extraction techniques (McKeown & Thomas, 2013).

The number of factors to retain during initial extraction may be based on statistical criteria (e.g. Eigenvalue >1.0, scree test, or parallel analysis) or theoretical knowledge (e.g. if the participant sample consists a certain number of distinct groups; Watts & Stenner, 2012). However, the general rule for an acceptable factor is to have at least 2 to 4 Q-sorts loading significantly on that factor (Brown, 1980; Watts & Stenner, 2012). A significant factor loading at 0.01 level is calculated using the following equation: Significant factor loading = $2.58 \times (1/\sqrt{\text{number of stimulus items}})$

Factors are usually rotated orthogonally to generate most distinct viewpoints using Varimax rotation, which accounts for the most common variance, or judgmental rotation, which allows for a deductive examination of theoretical assumptions about the data (Watts & Stenner, 2012). Then, defining sorts (i.e. those that correlate highly with a factor) are chosen to generate a full factor array. Different criteria may be used to identify defining sorts. In general, sorts that load significantly on a factor is considered defining. However, more stringent approaches to select defining sorts (e.g. Jordan, Capdevila, & Johnson 2005) have been proposed. At this point, it is crucial to identify confounding (i.e. loading significantly on more than one factor) and non-loading sorts. The goal is to create a factor structure with

“clean” factors that do not correlate with one another so that the subsequent viewpoints generated from these factors may be as distinct as possible.

The defining sorts for each factor are weighted to generate a full factor array and a corresponding composite Q-sort, which represents an overall viewpoint for the participants defining that factor in the original configuration of the Q-sort continuum. Within each factor, the normalized z score for each stimulus item is calculated based on its position on the Q-sort continuum in relation to all other items in that factor, which facilitates cross-factor comparison for individual stimulus items.

Interpretation of results usually begins with creating factor narratives for each factor viewpoint (Watts & Stenner, 2012), which provides a holistic and in-depth description of each view. Factors may be compared and contrasted based on how stimulus items are placed across composite Q-sorts, usually by means of consensus and distinguishing items (i.e. items that are ranked similarly or differently across factors, respectively). Three methods to draw cross-factor comparisons have been proposed: (1) the use of a *crib sheet* (Watts & Stenner, 2012) to compare factors based on stimulus items that are placed on extreme ends of the composite Q-sorts or those that are ranked higher or lower in comparison to all other factors, (2) the use of statistical techniques to identify distinguishing and consensus stimulus items based on normalized z scores, and (3) the use of conventional criteria to identify consensus (i.e. items ranked the same across all factors) and distinguishing items (i.e. items ranked at least ± 2 rank difference between composite Q-sorts; Brown, 1993).

Specific Aim 1: Examine how Chinese American mothers differentiate PD from CPA.

By-person factor analysis was conducted to elicit groups of Chinese American mothers who performed similarly on their Q-sorts. Centroid extraction method with Varimax rotation was used to elicit PD and CPA differentiations that were least correlated among the sample of Chinese American mothers. Factors were retained if they had an Eigenvalue greater than 1 and at least 2 participants defining that factor. Q-sorts were considered defining if they loaded on a factor at ± 0.60 or higher and the next highest loading is at least 0.20 smaller than the highest factor loading. These criteria were modified from those used by Jordan and colleagues (2005) to enhance inclusion of Q-sorts while assuring factors remain distinct.

Full factor array and composite Q-sorts were generated with weighted defining sorts for each factor. Cross factor comparisons were conducted using consensus and distinguishing statements based on normalized statement z scores. Factor narratives were created to describe the overall view of each factor. The qualitative data collected at the end of the sorting exercise were used to support the narratives. Lastly, descriptive statistics were used to describe demographic characters of participants in the full sample and those defining each factor.

Specific Aim 2: Examine how pediatric nurses differentiate PD from CPA

By-person factor analysis was conducted to elicit groups of pediatric nurses who perform similarly on their Q-sorts. Centroid extraction method with Varimax rotation was used in this analysis to generate most distinct views on PD and CPA differentiation among pediatric nurses. Factors were included if they had an Eigenvalue greater than 1 and at least 2 participants defining that factor. Defining

sorts were identified based on criteria similar to those described by Jordan and colleagues (2005); Q-sorts with an absolute loading of 0.70 or higher for one factor and less than 0.50 for any other factors were considered defining.

Defining Q-sorts were weighted based on factor loading to create full factor array and composite Q-sorts for each factor. Cross factor comparisons was employed using consensus and distinguishing statements based on normalized statement z scores. Factor narratives were created, which were supplemented by qualitative data from nurses' written comments on why they thought the statements they placed on the extreme ends of the continuum were most acceptable or unacceptable punishment behaviors. Lastly, demographic and nursing background characteristics were described and compared descriptively or inferentially using Mann-Whitney U or Fischer's exact tests. A thorough description of the analysis procedures are described in *Manuscript 3*.

Specific Aim 3: Describe how Chinese American mothers' differentiation between PD and CPA differ from those of pediatric nurses.

Q-sorts from Chinese American mothers and pediatric nurses were analyzed as an aggregate to examine their shared viewpoints in PD and CPA differentiation. By-person factor analysis using centroid method extraction was employed. Based on high correlations between Q-sorts and the distribution of Q-sorts on a 2-dimensional factor space (see Figure 3.2), a novel variant analysis method was used to elicit a general viewpoint and two variations of the general view. This variant analysis approach was used based on inherent similarities in PD and abuse

differentiations that resulted within the confines of the given Q-sample, which was informed by findings from Specific Aims 1 and 2.

The general viewpoint included Q-sorts that loaded significantly and purely on Factor 1 ($r = 2.58(1/\sqrt{71}) = 0.306$). The two variant viewpoints comprised of Q-sorts that significantly loaded on Factor 1, but also loaded significantly on Factor 2. The 2 variant factors were created based on these sorts' positive or negative factor loadings on Factor 2. Individual Q-sorts were weighted based on their factor loading to generate full factor array and composite Q-sorts. Cross factor comparison between the 3 viewpoints was conducted using the *crib sheet* method. Lastly, descriptive statistics were used to describe participant characteristics in the full sample and those defining each factor. A thorough description of the analysis procedures are described in *Manuscript 4*.

Exploratory Aim 1: Describe how acculturation influences Chinese American mothers' perceptions of PD and CPA.

Results from the acculturation measure, SL-ASIA, were scored based on instrument guidelines. Items 1-21 yielded one linear acculturation score, which was used as a continuous variable. Items 22-26 measured orthogonal acculturation and were scored using a matrix, and treated as nominal variables. Items 22 and 23 were used to assess acculturation in the Values domain and Items 24 and 25 were used to assess acculturation in the Behavior domain. Scoring for these items may result in 4 categories: Asian-identified, Western-identified, Bicultural, or Alienated. Item 26 is a single item used to assess Self-Identity. Each response option corresponds to one of 6 categories: Asian self-identified, Western self-identified, Bicultural-Asian self-

identified, Bicultural-Western self-identified, and Bicultural-Bicultural self-identified. Acculturation scores for the full sample of Chinese American mother were described using descriptive statistics. Linear and orthogonal acculturation scores were also compared between Chinese American mothers by generational status using Mann-Whitney-U and Fischer's exact tests, respectively. Significance level was set at $\alpha=0.05$.

This analysis focused on findings from Specific Aim 1. The generational status and linear and orthogonal acculturation levels of Chinese American mothers across factors were compared using Kruskal-Wallis and Fisher's exact tests. Post-hoc analysis was conducted using Mann-Whitney U tests with Bonferonni correction.

Due to small and unequal numbers of Chinese American mothers defining the different factors, the aggregate linear and orthogonal acculturation scores within factors were also compared descriptively to discern whether participants in different factors have different levels of acculturation. This is a common approach when examining participant characteristics across factors in Q-methodology (N. Akhtar-Danesh, personal communication, October 19, 2011).

RELIABILITY AND VALIDITY

A successful Q-study relies on proper adherence to the prescribed steps (McKeown & Thomas, 2013). According to Akhtar-Danesh and colleagues (2008), the validity of a Q-study is evaluated by content, face, and Q-sorting validity. Content validity can be assessed by literature review and domain experts (e.g. participants who elicit the Q-sample), and can also be tested via pilot studies. Face validity can be

assessed via extracting stimulus items using exact wording from concourse and verifying readability, applicability, and clarity of stimulus items. Further, participants serve as their own points of reference so that individual Q-sorts are deemed a valid expression of participants' opinions and are highly reliable (Dennis, 1986).

As van Exel and de Graff (2005) noted, the most important type of reliability in Q-methodology is replicability because only a limited number of distinct viewpoints exist on a given topic. Therefore, a reliable Q-study with a well-structured Q-sample will always review these perspectives. Select Q-studies show that the test-retest reliability of Q-sorts yield correlation coefficients ranging from 0.80 to 0.95 (Akhtar-Danesh et al., 2008).

HUMAN SUBJECTS AND PROTECTION

This study was approved by the Johns Hopkins Medicine Institutional Review Board (JHMIRB) on August 1, 2012 (Protocol #: NA_00074345). Self-selected participants who met the eligibility requirements were enrolled into the study following verbal consent. The study sample consisted of 11 Chinese American mothers in Phase 1 of the study, and an additional 35 Chinese American mothers and 48 pediatric nurses in Phase 2 of the study. The total number of participants was 94, including 91 (96.81%) women and 51 (54.25%) Asian/Pacific Islander. No children were included in this study.

Phase 1 participants were interviewed by phone according to an interview guide. The interviews lasted between 20 and 60 minutes. In Phase 2, participants completed a Q-sort and a demographic questionnaire in person or online. Mothers

in the second phase also completed an acculturation measure. The average time to complete the study for the pediatric nurses and Chinese American mothers was 49.25 ($SD=41.56$) and 42.60 ($SD=14.61$) minutes, respectively.

Informed Consent

All participants in this study were self-selected. Chinese American mothers provided verbal consent in accordance with the regulatory requirements of DHHS and FDA (i.e. the only record linking participants with the research would be the consent document and the principal risk would be potential harm from breach of confidentiality OR the research presents no more than minimal risk or harm to participants and written consent would not normally be required outside of the research context.) Verbal consent was used because Chinese American research participants are often uncomfortable with signing documents (M.C. Lee, personal communication, October 19, 2011).

The investigator read the informed consent script to all Chinese American mothers and they also received a copy of the script, which were available in both English and Chinese. Pediatric nurses read the informed consent script when they first entered the study website, before any data was collected. Nurses were informed that by virtue of entering the study, they had agreed to participate. All participants were informed that their participation was voluntary, that all information they provided would be kept strictly confidential, and that they could withdraw from the study at any time with no risks or penalty.

Potential Risks

No medical risks were anticipated. There was minimal risk that participants may experience distress during interviews or Q-sorting if the topic made them uncomfortable. The alternative was to decline participation or withdraw at any time. The study presented minimal risk to all participants by collecting limited, de-identified demographic data (e.g. age, sex, generational status, job position, etc.), all of which were kept strictly confidential.

There was a potential legal risk to Chinese American mothers for being reported to child protective services (CPS) if the parent self-disclosed information on personal use of certain behaviors that may be considered child abuse. The investigator was a mandated reporter of child abuse and was required to refer families to CPS under reasonable suspicion of child abuse per Maryland state law. Mothers were informed of this risk during verbal consent.

Adequacy of Protection Against Risks

In the event that the participant experiences distress, the investigator planned to stop the study and assess the situation. If needed, participants may be asked if they would like to be referred to speak with a community leader or social worker. Referral and information resources (e.g. American Academy of Pediatrics (AAP) website and AAP sponsored healthychildren.org website) were available to all participants at the end of the study.

All information elicited by participants was kept strictly confidential. No identifiable information was collected for this study. In Phase 1 of the study, participants were interviewed over the phone, and limited contact information (e.g.

first name and phone number) was collected to arrange for and conduct interviews. However, this information was kept in a separate log that was maintained in a locked cabinet and this information could not be linked to any data collected. Contact information for each participant was destroyed after their interview was complete. During the interviews, participants were informed that their participation was voluntary and they may end the interview at any time. No identifying information was audio-recorded. The tapes and interview transcripts were maintained in a locked cabinet.

In Phase 2 of the study, Chinese American mothers were each assigned a unique study identifying number. This was done so that the investigator could take a photograph of the completed Q-sort with the identifier number and link the sort with the demographic questionnaire and acculturation measure. All data were stored in a locked file cabinet and were entered into a password-protected computer. Pediatric nurses performed their Q-sorts and filled out a demographic and nursing background questionnaire online on a secured and password-protected internet application. Only the investigator had access to that data. The nurses completed the study anonymously and no identifiable information was collected. However, they could submit their email address to receive an online gift card worth \$25. All gift cards were delivered within 24 hours and record of the email address was immediately destroyed.

There was a potential risk that Chinese American mothers may be reported to CPS if they self-disclosed parenting behaviors that raises reasonable suspicion for child maltreatment. However, the objective of this study was to collect information

on general perceptions toward physical discipline and child physical abuse. No information were collected or elicited regarding parents' actual use of different discipline behaviors. During verbal consent, the benefits and risks of the study were described. The investigator disclosed her status as a mandated reporter of child abuse, and the limits of confidentiality, i.e. Maryland's child abuse reporting requirements, were described and discussed prior to collecting any information. This was done because one study showed that after proper disclosure of child abuse reporting requirements, the actual risk of participants being reported to the CPS by researchers is very low and it does not deter subjects from participating (Knight et al., 2006). There were no reportable incidents during this study.

Potential Benefits

This study had no direct benefit to the participants. However, the investigator had received anecdotal comments from Chinese American mothers about how performing the Q-sort helped them gain new insight about their own parenting practices and allowed them to think through how they differentiate discipline from abuse. In a broader sense, knowledge generated from this study has the potential to benefit other Chinese American parents by advancing our understanding of these parents' perceptions of PD, its differentiation from abuse, and how their differentiations may differ with those of mandated nurse reporters of child abuse.

FIGURE 3.1 Q-Sample by Statement Domain

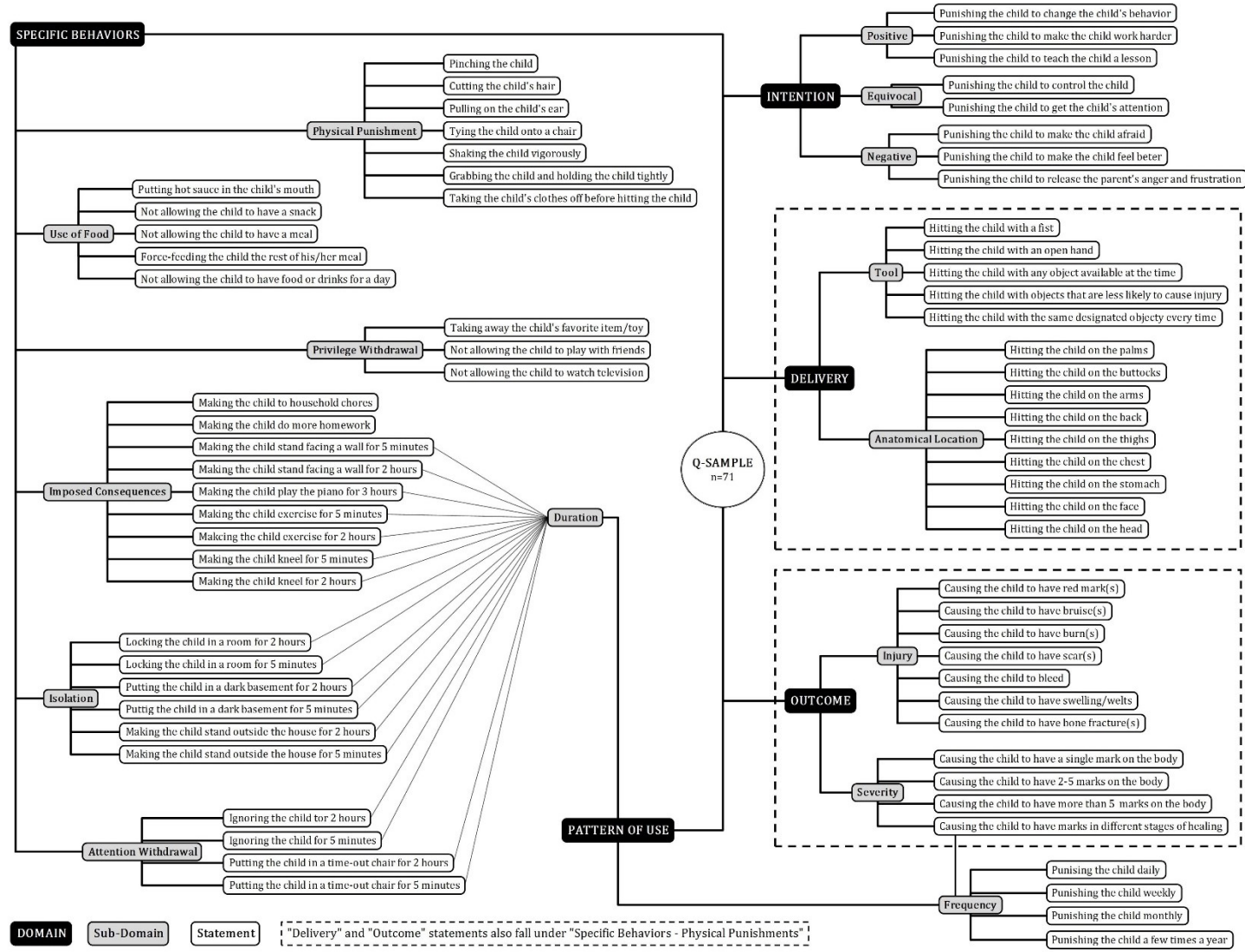
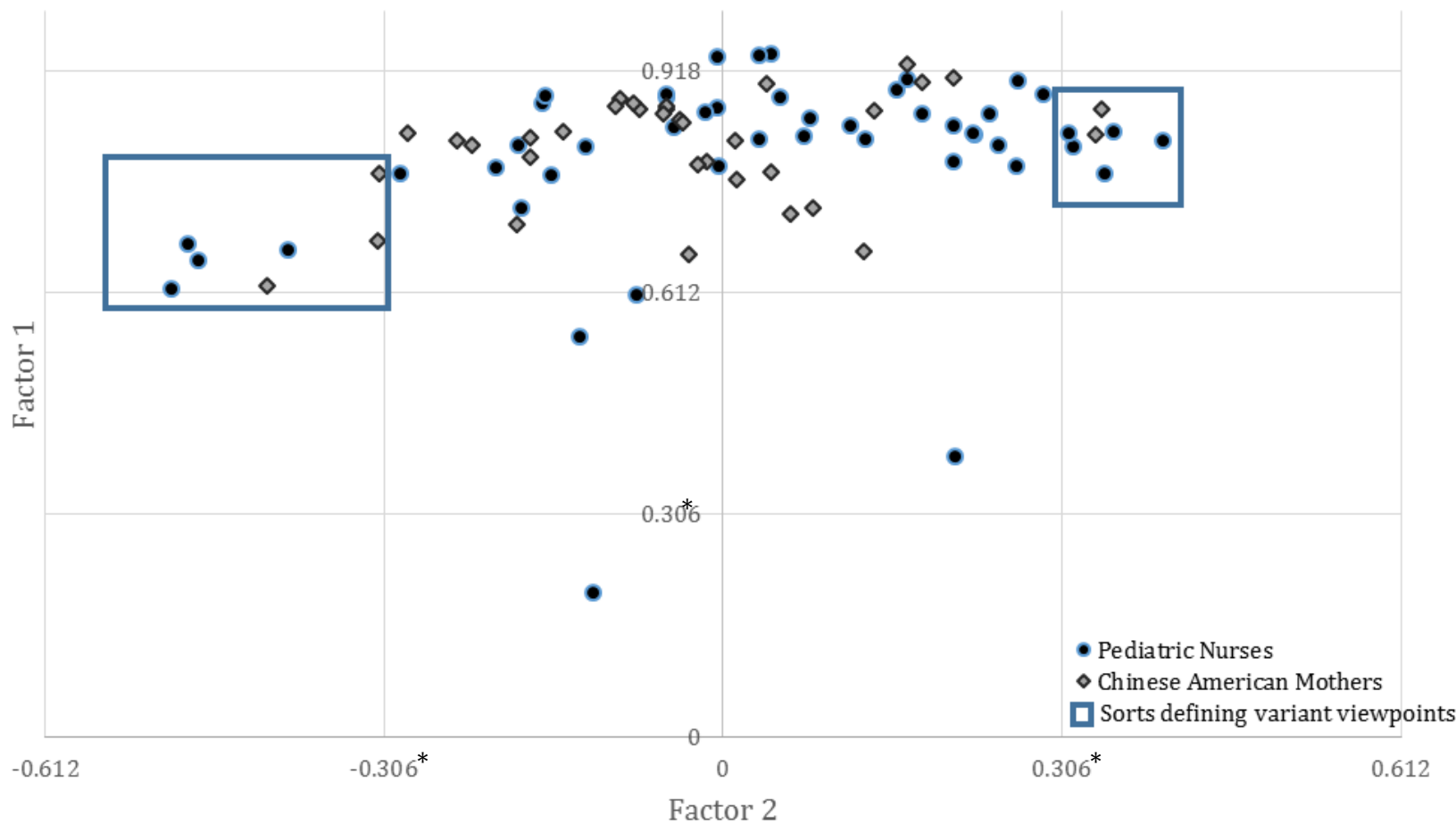


Figure 3.2 Distribution of Q-Sorts in 2-Dimensional Factor Space



n=83 *Significant loading $\geq |\pm 0.306|$

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CHAPTER FOUR: MANUSCRIPT TWO

Meaningful Examination of Perceptions and Attitudes in Nursing Research:

The Use of Likert Scales versus Q-Methodology

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ABSTRACT

Perceptions and attitudes are important nursing research constructs as they integrally relate to health, health behaviors, and healthcare delivery. A meaningful examination of these constructs requires understanding how perceptions or attitudes are formed, why and how they differ across groups, and what nurses can do to change or influence them. The most common strategy used to measure these constructs is the Likert scale. However, numerical data produced by Likert scales often lack or infer inaccurate meaning, which precludes drawing meaningful conclusions that have practical use in the real-world setting. This paper will critically examine the strengths and limitations of Likert scales and offer a brief introduction to Q-methodology as an alternative approach to examining perceptions and attitudes in nursing research.

INTRODUCTION

Perceptions and attitudes are important constructs in nursing research as they integrally relate to health, health behaviors, and healthcare delivery. Perceptions and attitudes affect a wide range of health-related phenomena, including dietary, sexual, and parenting behaviors. A CINAHL Plus database search yielded more than 1,600 articles published in nursing academic journals between the years 2000-2013 with titles using the words “perception” or “attitude.” Although widely studied, it is difficult to meaningfully capture perceptions and attitudes as they rely on self-reports of covert attributes that cannot be overtly measured or validated. The most common strategy for estimating these constructs are quantitative measures using Likert-type scaling. Although there are many advantages to using this strategy, it also has significant weaknesses that affect the interpretation of results, particularly when studying highly subjective and value-laden constructs common in health-related research. An alternate approach, Q-Methodology, uses a unique and systematic combination of qualitative and quantitative methods to empirically examine subjectivities in a meaning-preserving manner. This paper will critically examine the strengths and limitations of Likert scales and offer a brief introduction to Q-methodology as an alternative approach to understanding health-related perceptions and attitudes in nursing research.

PERCEPTIONS AND ATTITUDES: AN OVERVIEW

Concept analyses of perception and attitude recently published in the nursing literature suggest that these constructs are multifaceted, subjective, and individualized. Both constructs are psychological in nature, have a cognitive and

behavioral component, and represent an individual's understanding of a phenomenon (Altmann, 2008; McDonald, 2012). A fine distinction between perceptions and attitudes is that attitudes include an additional affective component that is bipolar (i.e. positive or negative; Altmann, 2008) and serves as the individual's psychological response to the phenomenon.

Perceptions are defined as "an individual's or group's unique way of viewing a phenomenon that involves the processing of stimuli and incorporates memories and experiences in the process of understanding" (McDonald, 2012). The 3 essential attributes of perception are (1) a sensory awareness or cognition of the experience, (2) personal experiences that create a lens for interpreting and understanding a phenomenon, and (3) comprehension that can lead to a response (McDonald, 2012). Attitudes are defined as a mental state in response to a stimulus which involves emotions and dispositions to act in certain ways. The 3 defining attributes of attitudes are (1) a conscious or unconscious mental state, (2) a value, belief, or feeling, and (3) a predisposition to behavior or action (Altmann, 2008). In short, perception is the awareness, comprehension, and interpretation of a stimulus, and a prerequisite to the formation of an attitude toward such stimulus.

Capturing perceptions and attitudes relies on inferring these underlying affects from the respondents' cognitive appraisal of the situation and their subsequent overt behaviors (i.e. completing a task). These constructs are often examined through quantitative approaches such as Likert scales, which allows for ease of statistical analyses and comparisons across groups. However, as will be

described below, there are a number of limitations to these survey approaches that can impact interpretation and translation to practice.

THE LIKERT SCALE

Characteristics, Assumptions, and Advantages

The Likert scale is one of the most commonly used psychometric scales for examining self-reported perceptions and attitudes. It is a unidimensional scaling approach based on classical measurement theory, which uses a single type of stimulus and a single type of response. The Likert scale items are generated from operationalizations or empirical referents of an underlying latent construct (van Alphen, Halfens, Hasman, & Imbos, 1994) that is often determined by the researcher or scale developer. The original Likert scaling procedure utilizes 5 ordinal response categories ranging from “most agree,” “agree,” “neutral,” “disagree,” and “most disagree.” However, various response alternatives ranging from 4- to 10-point scales (Wakita, Ueshima, & Noguchi, 2012) that include or exclude a neutral category (Pedhazur & Schmelkin, 1991) and with different types of ordinal response categories (e.g. how often or how much) have also been used. Each response category is assigned a numerical value (e.g. 0-4 or 1-5 for a 5-point scale) for subsequent analyses.

Based on a summative model, responses with varying intensities of agreement or disagreement are summed to yield a single score (Pedhazur & Schmelkin, 1991). The final score can be a simple summation of individual item responses, or is often expressed as an average where the total score is divided by

the number of items, which provides an exact numerical measurement of the latent psychological trait that is being assessed (Wakita et al., 2012). As a result, any systematic score variation among respondents is assumed attributable to the underlying differences in the latent trait (van Alphen et al., 1994). The summative model used in Likert scaling has 2 important assumptions. First, all scale items are assumed to lie on a linear continuum that relates to a unidimensional latent construct where the strength and intensity of the construct are assumed to be linear (Rattray & Jones, 2007). In other words, all items are treated as parallel instruments and must have high inter-item correlation as they relate to a linear, unidimensional construct (van Alphen et al., 1994). Second, the psychological distances between adjacent response categories are assumed equal and responses are statistically treated as interval level data (Wakita et al., 2012).

Several advantages of using the Likert scale have been identified. Most notably, Likert scales are economical, easy to administer, and allow one to collect information in a standardized manner (Rattray & Jones, 2007). Importantly, summated scores from a representative sample can be easily analyzed and compared using parametric tests to draw inferences about a wider population and comparisons across groups. Despite these advantages, several limitations of Likert scales have been identified, including how one infers meaning about perceptions and attitudes based on the numeric values obtained and their appropriate use across cultural groups.

General Criticisms of the Likert Scale

One of the most prominent claims against the use of Likert scales is its treatment of ordinal response categories as interval level items (Jamieson, 2004). The ordinal nature of Likert response categories merely ranks response options hierarchically and lack quantitative structure (i.e. standardized units of measurement), which cannot possess interval or ratio properties (Annett, 2002). Despite these theoretical violations, Likert data are scored based on the sum or the mean of scale items and are often compared using parametric tests, which can only be theoretically valid if the data was expressed using interval or ratio scales (Kuzon, Urbanchek, & McCabe, 1996). However, many continue to argue that the summative nature of Likert data ultimately yields scores that are conceivably interval in nature (e.g. Carifio & Perla, 2008), thus satisfying minimum assumptions of parametric testing.

While statistically feasible, simply assigning numerical values to ordinal level data for analysis remains highly debated because such statistical findings often lack meaning (Marcus-Roberts & Roberts, 1987). For example, if one were to employ a 5-point Likert scale to assess the agreement of a certain construct where each response category was assigned a numerical value from 0-4, an average item score of 1.2 provides a numerical indication of agreement, but does not offer any meaningful interpretation, i.e. interpretation would require something to the effect of “more agreement than no opinion at all but not quit agreeing yet”. Further, one cannot assume that the average item score of 1.2 is equivalent or can be interpreted as having equivalent meaning across participants. In other words, the data appear

valid from a strictly numerical standpoint, but the numbers may not necessarily or accurately reflect the true magnitude of the underlying construct being measured (Norman, 2010). This demonstrates that meaningfulness of data analyzed using the summative model is only admissible in purely interval or higher levels of measurement (Knapp, 1990), and becomes questionable when ordinal level of measurement is employed.

Michell (1986) suggested a critical appraisal of two opposing measurement paradigms to understanding these issues. The first paradigm, supported by operational and classical measurement theorists, posits that measurement is based on the simple, consistent assignment of numerical values to objects so that relationships between constructs (both manifest and/or latent) can be examined quantitatively (Knapp, 1990; Wang, Yu, Wang, & Huang, 1999). As Lord (1953) famously noted, “The numbers don’t remember where they came from” (pp751). In this sense, the comparisons of means and the use of parametric statistics is appropriate for ordinal data and, not surprisingly, this paradigm forms the basis of Likert scaling.

On the other hand, representational measurement theorists argue that measurement should be based on providing statistics that reflect empirical relations between objects in the real-world setting. In other words, the goal of measurement from a representational standpoint is to draw scale-free conclusions based on scale-specific items (Knapp, 1990), and only invariant (i.e. meaning-preserving) computation techniques, i.e. medians and nonparametric tests, are permissible for analyzing ordinal data. The representational paradigm, which is considered a strong

view of measurement (Nunnally & Bernstein, 1994), directly challenges the statistical approach currently used in the treatment of Likert data because the summation and parametric analyses of Likert data do not preserve the meaning of the original ordinal responses.

In their seminal paper, “Meaningless Statistics,” Marcus-Roberts and Roberts (1987) argued that it is always statistically admissible to use means and parametric tests to analyze ordinal level data, but it is not appropriate to draw conclusions and describe something fundamental about the population using those statistics unless meaning is preserved. To this end, some have questioned whether the summative scoring of Likert scales can potentially misrepresent the clinical meaning of the measured construct. In their study, Hinds, Schum, and Srivastava (2002) found that different patterns of response can result in the same total score. Further, clinical significance may be found based on individual items but not when scoring the items as an aggregate, and vice versa. This suggests that the summative nature of Likert scoring may over- or underestimate clinical significance or even lack clinical relevance altogether.

Likert Scales in Cross-Cultural Research

The use of Likert scales may impart cultural bias in three ways: (1) the content of the instrument may hold different meanings across different cultures, (2) the process of test taking may elicit different psychological responses (e.g. anxiety) in different cultures, and (3) the format of the instrument may not be familiar or meaningful to different groups (Flaskerud, 1988). While the first two points are common challenges in measurement regardless of the measurement tools

employed, the format of the Likert scale and its influence on the response in different cultures is noteworthy.

Extensive research has focused on the differences in the use and understanding of Likert scales across cultural groups, and previous studies showed that some cultural groups had difficulty understanding the rank continuum of response categories used in Likert scales (Flaskerud, 1988). For these groups, a dichotomous response (e.g. yes or no) was preferred regardless of the respondents' level of literacy, hence indicating the gradation of Likert response format is simply not meaningful to them. In addition, response pattern for Likert items also differs across cultures. Five cultural variations in response formats have been discussed in the literature, namely, positivity bias, negativity bias, low standard deviation, inconsistency of related items, and consistency of unrelated items (Watkins & Cheung, 1995). These differences in response patterns have significant implications on cross-cultural research because they directly affect the reliability, validity, and the cross-cultural equivalence of the scale (Heine, Lehman, Peng, & Greenholtz, 2002; Hui & Triandis, 1989; Lee et al., 2002).

Much research has focused on the disparate tendencies to use extreme responses among respondents of diverse racial or cultural groups, i.e. moderacy/ extreme response styles. For example, Japanese and Chinese respondents are less likely to select extreme responses than their American counterparts even after controlling for other demographic variables (Lee, Jones, Mineyama, & Zhang, 2002), while blacks are more likely to select extreme responses than their white

counterparts (Bachman & O'Malley, 1984). Hui and Triandis (1989) offered two possible explanations to these differences in response patterns:

The first, cultural, explanation posits that how a person responds to Likert items is dependent upon their inherent cultural values and beliefs, as well as the norms of responding in that culture. For example, if it is culturally appropriate to respond cautiously and conservatively, then the respondent is more likely to respond using the middle of the scale, whereas if it is culturally appropriate to exhibit strong opinions, the respondent is more likely to use extreme responses. If this explanation is true, it renders comparisons of cultural groups using Likert scales incommensurable because comparisons would reflect cultural differences in response norms rather than differences in the latent construct itself.

The second explanation, based on human psychology and judgment, posits that respondents' use of extreme responses is related to how well they can map their subjective response to the response categories presented on the Likert scale. If respondents are able to match their range of subjective responses to the response categories presented on the Likert response continuum, then they are less likely to choose extreme responses. Indeed, increasing the number of response categories biases respondents against using more extreme responses (Wakita et al., 2012). For example, a comparison of extreme response styles among Hispanic and non-Hispanic respondents showed that Hispanic respondents had a significantly higher tendency to use extreme responses for a 5-point Likert scale compared to their non-Hispanic counterparts; however, the two groups' response patterns converged when a 10-point Likert scale was used (Hui & Triandis, 1989).

Taken together, these explanations suggest certain cultural groups may require unique response formats to accommodate their differences in response patterns. Importantly, cultural differences in response patterns may affect the conclusions drawn when making cross-cultural comparisons using Likert scales (Lee et al., 2002).

Measuring Perceptions and Attitudes with Likert Scales

Our previous discussions suggest that Likert scales may not be the most optimal tool to assess perceptions and attitudes because they may not provide theoretically meaningful and clinically relevant data. Also, the format of Likert scales may impart cultural bias and preclude drawing sound cross-cultural comparisons. Three additional measurement considerations specific to the use of Likert scales for perceptions and attitudes are noteworthy.

First, the unidimensional scaling approach used in Likert scaling may not adequately capture perceptions and attitudes as complex, multidimensional constructs. As a result, many Likert scales that measure perception- or attitude-related constructs utilize subscales to parse out the associated domains, and calculate individual subscale scores in addition to a composite scale score. Although the use of subscales yields a more in-depth measurement of the construct's underlying domains, examining these domains in a vacuum precludes understanding perceptions or attitudes in its total, especially the interaction and relations between such domains.

Second, measuring perceptions and attitudes with Likert scales is considered a norm-referenced approach that simply compares a respondent's performance

relative to those of other respondents within a well-defined comparison group (Waltz, Strickland, & Lenz, 2010). As previously discussed, the summative scoring of Likert items negates the different patterns of responses that result in the same total score, thereby overlooking the nuances in how perceptions and attitudes differ across respondents who scored the same. In addition, this approach only provides a quantitative magnitude in score difference, and offers little guidance on the theoretical or fundamental differences of perceptions and attitudes between respondents who scored differently.

Finally, the meaning and interpretation of Likert scale items must be equivalent between respondents and the researchers who created them, as well as across respondents, so that valid findings can be made and compared based on how respondents are positioned on the unidimensional continuum of the latent construct (Heine et al., 2002). This intersubjectivity (i.e. shared meaning; Annett, 2002) is particularly important as it lays the foundation to measuring and comparing perceptions and attitudes. However, most Likert scales that measure perceptions and attitudes are based on researchers' operationalizations of the construct and many sources of bias, such as cultural or administration bias, can threaten the validity of Likert scales when used in different groups or testing environments. While creating scales that are unique to a certain group can enhance scale validity, it does not allow for drawing meaningful comparisons across groups.

Examining perceptions and attitudes requires understanding them as multidimensional, subjective, and individualized constructs. Further, the primary purpose of examining these constructs is to enhance our understanding and the goal

is to inform practice in a direct and meaningful manner. The prevailing use of Likert-type surveys to measure perceptions and attitudes is an attempt to provide numerical data for constructs that inherently lack quantitative structure (Annett, 2002). While statistically feasible, the difficulty in making sense of such data lies in translating numerical measurements into accurate and meaningful results for nurses, including how perceptions or attitudes are formed, why and how they may differ across groups, and, importantly, what nurses can do to change or influence them.

We have discussed numerous psychometric and instrumentation issues that suggest Likert scales is not the optimal tool for examining perceptions and attitudes. These methodological issues are profound because examining perceptions and attitudes should enhance understanding and inform practice in a meaningful and applicable manner. Therefore, the prevailing quantitative “measuring” approach used to examine perceptions and attitudes must be revisited, and alternative methods that take on an “understanding” approach must be explored. In the following discussion, we will showcase Q-methodology as an alternative approach to examine these constructs.

Q-METHODOLOGY

An Introduction to Q

Q-methodology was developed by William Stephenson to empirically study human subjectivity (Stephenson, 1935), and it is based on the assumptions that subjectivity is both communicable and self-referent (McKeown & Thomas, 2013).

While prevailing quantitative studies investigate phenomena based on theoretical formulations and use scales to measure constructs that are operationalized by the researcher (Dennis, 1986), Q-methodology allows research participants to create their own meanings that bear on their internal frames of reference through the operational medium of a Q-sort (McKeown & Thomas, 2013).

In recent years, many papers have been published in nursing literature detailing the steps to conduct a Q-study (e.g. Akhtar-Danesh, Baumann, & Cordingley, 2008; Cordingley, Webb, & Hillier, 2005; Simons, 2013). In general, a Q-study is performed in two sequential phases: (1) Creating a Q-sample, and (2) Q-sorting and analysis. The first phase entails using qualitative methods to compile a clear and representative collection of stimulus items on the topic of study. Although Q-samples are commonly presented in the form of written statements, other types of Q-samples (e.g. pictures) may be used for different research questions (e.g. examining aesthetic preferences; Fairweather & Swaffield, 2002) or populations (e.g. cross-cultural or low literacy participants; Simpson, 1989).

In Q-sorting, a participant ranks and assigns a collection of test stimuli (i.e. the Q-sample) on a Q-sort continuum that is anchored by two bipolar psychological extremes on either end (e.g. “Most Agree” and “Most Disagree”; McKeown & Thomas, 2013). The participant performs the sort based on a condition of instruction that tells the participant how to sort the Q-sample, which may be a simple request of agreement and disagreement, or to elicit operationalizations of theoretical constructs by assessing participants’ levels of agreement to test stimuli describing that construct (McKeown & Thomas, 2013). The Q-sort continuum is

often presented in an “inverted, quasi-normal distribution” (McKeown & Thomas, 2013) that restricts the number of stimulus items a participant can place under each rank along the continuum, hence allowing data collection in a standardized manner.

To analyze this data, by-person factor analysis is used to yield groups of participants who performed similarly on their Q-sorts. Then, a unique composite Q-sort is generated for each participant group (i.e. factor) to present an overall view of how participants within that group sorted the stimulus items. The resulting composite Q-sorts across participant groups can then be compared and contrasted based on similarities and differences in the placement of stimulus items. Further, the gestalt configuration of composite Q-sorts offers a holistic view of how subjectivities among participant groups vary based on how stimulus items were rank ordered in relation to one another (Watts & Stenner, 2012).

Q-methodology may serve as an important starting point to understanding perceptions and attitudes as it enables us to systematically uncover a variety of viewpoints about an issue, identify how these viewpoints may overlap or differ, and examine the characteristics of people who have similar or opposing views (Akhtar-Danesh et al., 2008). Many advocate the use of Q-methodology in nursing research (e.g. Cordingley et al., 2005; Dennis, 1986, Tetting, 1988) because it is particularly useful for exploring human perceptions and attitudes (Chinnis, Summers, Doerr, Paulson, & Davis, 2001; Cross, 2005). The following discussion will highlight some of its strengths and limitations.

Understanding Perceptions and Attitudes with Q

Q-methodology was designed with an inherent understanding that subjectivities are complex and multifaceted, and that subjectivities must be examined in their totality. For example, the Q-sorting process is an acknowledgement of the complexity of an individual, as the task inherently requires drawing complex comparisons between items from different sets of measures (i.e. domains; Kerlinger, 1972) that is ordinarily parsed out as subscales when measured with Likert scales. Similarly, the analysis of Q data (i.e. by-person factor analysis) compares individuals based on the overall pattern of their sorts, and yields results that are truly representational (i.e. meaning-preserving). In other words, findings from Q can directly and precisely inform what the different viewpoints are and how they converge and diverge. In addition, unlike the normative approach used in Likert-type surveys, every viewpoint uncovered in Q exists in its own right and cannot be deemed quantitatively superior or inferior to another. The factors emerge organically when participants interpret and sort the Q-sample (i.e. test stimuli) to construct a representation of their view (Ramlo & Newman, 2011). In other words, no assumptions were built into the method that may influence how participants would perform or complete their sorts (Cross, 2005). Therefore, Q-methodology is well-suited for examining perceptions and attitudes as multifaceted, subjective, and individualized constructs.

From an instrumentation standpoint, Q-methodology circumvents many potential biases that are problematic in Likert scales. In Q-methodology, subjectivities are made operant through the task of sorting stimulus items in an

ipsative (i.e. comparison) approach where each stimulus item elicits a psychological response that is based in relation to other stimulus items. This approach is advantageous as it requires participants to make simple yet decisive judgments about stimulus items within and across different domains of the construct without researchers' imposed assumptions about these judgments (e.g. how questions are phrased; Annett, 2002). In addition, all participants create and define their own response anchors ranging from one psychological extreme (e.g. "Most Agree") to the other (e.g. "Most Disagree") and make the same number of discriminations (i.e. comparisons) to complete the sort. This bypasses potential social, cultural, or administration biases common in Likert-type surveys, and allows for meaningful comparisons of viewpoints across members of different groups.

There are several limitations of Q-methodology; an important one is its generalizability, i.e. one cannot guarantee that all possible viewpoints are uncovered or representative of the views supported by all individuals in the population. Q-methodology helps reveal the general viewpoint of people who think similarly, but the variation in viewpoints is highly dependent upon participant sampling. While small and purposive participant samples are often used to ensure viewpoint variability, this precludes estimating population statistics and drawing inferences about the characteristics and proportions of people who endorse each view. Further, participants' viewpoints are created based on the test stimuli presented to them and interpreted based on the researchers' understanding of their sorts, both of which are potential sources of bias (Cross, 2005). Lastly, conducting a Q-study is logistically more challenging compared to using Likert-type surveys. For example,

the Q-sorting procedure is an intensive exercise and a much less familiar or efficient data collection method compared to Likert-type surveys. Therefore, participants usually need more time and direction to complete a Q-sort.

EXAMINING PERCEPTIONS AND ATTITUDES: LIKERT VERSUS Q

Our previous discussions highlighted some fundamental differences, advantages, and disadvantages of using Likert scales and Q-methodology to examine perceptions and attitudes. The strengths and limitations of using Likert scales versus Q-methodology per each step of the research process are listed in Table 4.1. In general, the decision to use either approach relies on the issue we are trying to address as each approach serves a different purpose (Thompson et al., 2012); while the primary strengths of using Likert-type surveys are the ability to draw inferences about a population and generalize our findings, Q-methodology allows participants to create meaning and prioritize their preferences based on the entire discourse surrounding a topic, thus revealing viewpoints without researchers' presuppositions.

A few studies have directly compared Likert and Q data (e.g. ten Klooster, Visser, & de Jong, 2008; McKeown, 2001). Findings from these studies unanimously suggest Likert data offers a macro examination of subjectivities based on a normative approach, but Q-methodology offers a uniquely detailed understanding of diverse subjectivities and meanings that are often lost in summative scoring techniques. As Annett (2002) noted, quantitative measures enable us to understand the structure of relationships between constructs, but the challenge in understanding subjective constructs themselves is that our prevailing measurement

systems (e.g. Likert scales) do not provide a representational view of what is being measured, and we are a long way from prescribing single measures to fully understand these constructs. In other words, there appears to be a missing link that precludes us from measuring perceptions and attitudes meaningfully.

Perhaps Likert and Q should not be viewed as competing approaches but, rather, as sequential approaches for advancing our knowledge of perceptions and attitudes. The use of quantitative measures for inferential purposes is vital for building theories and advancing the science, but accurate and valid measurements of perceptions and attitudes rely on clear conceptual definitions and an in-depth understanding of these constructs (Altmann, 2008; McDonald, 2012), which the systematic integration of qualitative and quantitative methods in Q-methodology can offer. Notably, Q methods have been used to assist in scale development for subjective constructs in nursing research. For example, Stokes and Gordon (1988) used the Q-sort to elicit salient items related to stress in older adults and relied on participants' Q-sorts to determine the weighting of individual scale items for scoring before developing the Stokes-Gordon Stress Scale using the Likert format. Although a more complete integration of Q-methodology in the scale development process may be warranted and some advancements have been made to bridge the gap between understanding and measuring subjectivities with Q-methodology and Likert scales, they are beyond the scope of this paper. For a more in depth description of using Q-methodology in health-related survey development, see Baker, van Exel, Mason, and Stricklin (2010).

SUMMARY AND RECOMMENDATIONS

Meaningful examination of perceptions and attitudes requires understanding how perceptions or attitudes are formed, why and how they differ across groups, and, importantly, what nurses can do to change or influence them when those perceptions and attitudes affect our health. The mainstream use of Likert scales is an incomplete examination of perceptions and attitudes as multidimensional, subjective, and individualized constructs. Further, the psychometric and instrumentation challenges common in using Likert scales to measure perceptions and attitudes suggest the use of this approach must be revisited. Alternatively, a different approach that yields and preserves meaning and enhances understanding of these constructs, such as Q-methodology, should be employed. Because perceptions and attitudes are important nursing research constructs as they integrally relate to health, health behaviors, and healthcare delivery, nurse scientists should encourage the exploration and utilization of unique methodologies that directly speak to a meaningful examination of these constructs.

Table 4.1 Examining Perceptions and Attitudes with Likert vs. Q

	Likert Scales	Q-Methodology
Research Purpose	To <i>measure</i> perceptions and attitudes using a normative, unidimensional scaling approach	To <i>understand</i> perceptions and attitudes by uncovering different viewpoints on a phenomenon
Data Collection	<ul style="list-style-type: none"> ✓ Economical and efficient ✓ Familiar format; Participants do not need a lot of directions in order to complete the scale ✓ Easy to administer ✗ Large participant sample size required for statistical power ✗ Scales developed based on theoretical formulations and researchers' operationalizations of the construct ✗ Vulnerable to social desirability and response-set biases ✗ Use of subscales precludes understanding constructs in their totality ✗ Understanding of rank continuum and gradation of response categories differs by culture and may be a source of bias when drawing cross-cultural comparisons ✗ Cultural differences in response patterns may preclude drawing meaningful conclusions about underlying differences in latent trait ✗ Conceptual meaning of scale items may not be equivalent across different cultural groups 	<ul style="list-style-type: none"> ✓ Small, purposive participant sampling used to capture different viewpoints ✓ Participants create their own interpretations and meanings while Q-sorting; no built-in assumptions that may influence how participants would complete or perform their sorts ✓ Participants draw complex comparisons between and within items from different domains of a construct ✓ All participants make the same number of discriminations and define their own response anchors, thus limiting risk for response-set (e.g. acquiescence/ extreme response) and cultural biases ✗ Participants must create their viewpoint based on the Q-sample (i.e. test stimuli) provided ✗ Time consuming ✗ Unfamiliar format ; Participants need detailed directions in order to complete the sort ✗ Requires extensive preparation prior to administration (e.g. preparing cards for sorting)
Data Analysis	<p><i>Summative scoring method</i></p> <ul style="list-style-type: none"> ✓ Provides exact numerical measurements of construct ✓ Easy to analyze using descriptive and inferential statistics ✗ Ordinal response categories treated as interval level data ✗ Forcing quantitative structure onto constructs that lack standardized units of measurement 	<p><i>By-person factor analysis</i></p> <ul style="list-style-type: none"> ✓ Uncovers and provides quantitative structure to prevailing viewpoints surrounding a topic ✓ Different viewpoints may be compared and contrasted based on patterns of the sorts ✓ Viewpoints are kept intact during analysis, thus allowing the examined constructs to be understood in their totality
✓ Strength ✗ Limitation		

Table 4.1 (cont'd.) Examining Perceptions and Attitudes with Likert vs. Q

Interpretation of Results	<ul style="list-style-type: none"> ✓ Systematic score variation can be easily compared to infer differences in latent trait ✓ Numerical comparisons between groups can be easily drawn using parametric tests ✓ Interpretations are based on statistical significance ✓ Data from representative samples can be used to draw inferences about a wider population ✗ Some meaning may be lost through summative scoring ✗ Provides limited detail on how perceptions and attitudes may differ across respondents or groups (i.e. different patterns of response) ✗ Conceptual meaning of response categories and scores obtained may not be equivalent across participants ✗ Potential loss of clinical significance/relevance when individual scale items are summed for scoring 	<ul style="list-style-type: none"> ✓ Meaning and patterns of response are preserved by individual and composite Q-sorts ✓ Nuances in how perceptions and attitudes differ are highlighted by different placements of stimulus items ✓ Provides precise indications for where perceptions and attitudes converge or diverge across different viewpoints ✓ Reveals a general viewpoint for people who think similarly ✓ Viewpoints may be examined and compared in their totality or by domain ✗ Viewpoints are described based on researchers' interpretations of the composite Q-sorts ✗ Small sample size precludes drawing inferences about characteristics and proportions of people who endorse each viewpoint
✓ Strength ✗ Limitation		

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CHAPTER FIVE: RESULTS

This dissertation study used Q-methodology to examine how Chinese American mothers and pediatric nurses differentiation physical discipline (PD) and child physical abuse (CPA). Further, Chinese American mothers' levels of acculturation were assessed to discern its influence on these mothers' perceptions of PD and CPA.

This chapter reports the results of this dissertation study. The chapter beings with a description of the Q-sample and findings from Phase 1 of the study. Following are the results of the study by study aim, organized in three parts:

Part I addresses Specific Aim 1 and Exploratory Aim 1, and reports findings on Chinese American mothers' PD and CPA differentiations, and the influence of acculturation on their perceptions of PD and CPA.

Part II (Manuscript 3) addresses Specific Aim 2 and presents results on how pediatric nurses differentiate PD from CPA.

Part III (Manuscript 4) addresses Specific Aim 3 and describes differences in PD and CPA distinctions among Chinese American mothers and pediatric nurses.

Note: All composite Q-sorts generated from this study are available in *Appendix B*.

THE Q-SAMPLE

The major findings of this study were obtained within the confines of the Q-sample (i.e. the list of 71 statements related to the behavior or outcome of punishing a child). In this study, the Q-sample was compiled using examples of physical punishment behaviors from 11 qualitative interviews with Chinese American mothers, and was designed to encompass a wide range of behaviors that may range from mild discipline to abusive. The most compelling finding from these interviews was that the definition of PD in the Chinese American culture starkly deviated from the one that is currently used in PD research. In general, PD is defined as a parenting practice where physical force is used “with the intention of causing a child to experience pain, but not injury, for the purpose of correction or control of the child’s behavior” (p.4; Straus & Donnelly, 2001). However, the qualitative interviews revealed the use of physical force or the experience of pain are not necessary attributes of PD in the Chinese American culture.

The Chinese term for PD (*Ti Fa*) directly translates to “body punishment.” Findings from the interviews suggest all punishments that involve the “body” or, in other words, a physical aspect, were considered as PD. For example, some physical punishment behaviors elicited from the interviews were related to restricting the child’s activity (e.g. putting the child on a time-out chair), imposing physical consequences (e.g. making the child do household chores), isolating the child (e.g. locking the child in a room), and withholding physical needs (e.g. not allowing the child to have a meal). Some Chinese American mothers also referenced examples of

attention and privilege withdrawal as forms of PD, perhaps because parents' physical action alone are also considered forms of PD to these mothers.

PD in the Chinese American community encompasses behaviors that extends beyond its common definition. Although this study originally set out to specifically examine PD and CPA, some examples of physical punishment behaviors not only shade into CPA, but may also shade into neglect and emotional abuse under the current typologies of child maltreatment. Despite these added complexities, all physical punishment behaviors elicited from the interviews were retained to create the Q-sample to examine PD and CPA differentiation within the context of Chinese Americans' definition and understanding of PD.

Separately, all of the Chinese American mothers interviewed agreed that PD is a common practice in the Chinese American community, and many of them candidly shared that the execution and outcome of PD are central to its differentiation from CPA. When the mothers were asked how they think a Chinese parent differentiates PD from CPA, many expressed that the acceptability of PD depends largely on *how* it is used, and more so than the actual behavior itself. There were several factors that point to different aspects of *how* PD is used. For example, one US-born mother explained that it depends on the parent's rationale for exercising punishment:

I think of discipline as like you're trying to correct a behavior, but abuse is like the parent has their own issues. It's out of control and isn't really trying to correct the behavior... I think they just kind of were irritated.

Other mothers alluded to basing the acceptability of PD on whether it physically hurts the child:

I guess if it leaves marks. Like if they're leaving welts on the kid and the child gets a bruise, that is too far. When you're gonna use physical discipline, you should not be able to see the after-effects like a couple hours later. Like if you're gonna spank a child, once or twice gets the point across. (US-born mother)

How it was delivered:

When it comes to physical punishment, like spanking... it depends if you're spanking with the hands or using another object like a roller, and then also how many times you spank. Like is it just once or twice or is it like you keep beating on the child. (US-born mother)

Or how long or how often PD is used:

As a parent, sometimes, you just can't communicate with your child. There's a moment, the child is a little crazy and they don't listen to anything... So at that moment, you put him in the basement, he'll be scared, then he won't do it again next time... Of course I don't let him stay there all day, or not give him food, it's just a short time and you can't do it all the time. (Foreign-born mother)

This qualitative analysis generated 5 contextual domains of PD, which included (1) specific PD behaviors, (2) the intention for PD use, (3) the delivery of PD, (4) the outcome of PD, and (5) the pattern of PD use. Statements that exemplified each domain were drawn directly from the qualitative interviews to create the Q-sample for subsequent Q-sorting. These domains and their related sub-domains are further described in *Manuscript 3*. The final Q-sample consisted 71 statements related to the behavior or outcome of punishing a child, and were used in Phase 2 of this study for Q-sorting.

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PART I. SPECIFIC AIM 1 & EXPLORATORY AIM 1

Three viewpoints on PD and CPA differentiation were uncovered among 20 foreign-born and 15 US-born Chinese American mothers. An initial comparison of acculturation levels between foreign- and US-born Chinese American mothers suggest acculturation variability was adequate through quota sampling by generational status. US-born mothers reported significantly higher linear acculturation scores (i.e. more acculturated) than foreign-born mothers. The two groups of mothers also differed in the Behavior and Self-Identity domains of orthogonal acculturation. A higher proportion of foreign-born mothers were Bicultural (80% vs. 53.33%) and a higher proportion of US-born mothers were Western-identified (40% vs. 0%) in the Behavior domain. In the Self-Identity domain, a higher proportion of foreign-born mothers were Asian self-identified (60% vs. 0%), and a higher proportion of US-born mothers were Bicultural, Bicultural self-identified (80% vs. 15%). These results are presented in Table 5.1.1.

The 3 factors explained 75% of the total study variance; the correlation between factors ranged between 0.72 and 0.75, demonstrating substantial similarities across the 3 views. The 3 factors were defined by 14 Chinese American mothers who performed most differently on their Q-sorts. The rest of this sample provided confounding sorts (i.e. sorts that loaded significantly on more than 1 factor based on *a priori* criteria) and were omitted from this analysis; this is a common practice when the goal is to elicit viewpoints that are most unique. The demographic and sorting characteristics of all Chinese American mothers in the sample and those who endorsed each viewpoint are summarized in Table 5.1.2.

The statements that were ranked highly acceptable (i.e. ranked “+4” and higher) and highly unacceptable (i.e. ranked “-4” and lower) across composite Q-sorts are listed in Table 5.1.3. There was wide consensus on highly unacceptable punishment behaviors across the 3 views. All Chinese American mothers considered physical punishment that resulted in serious injuries (e.g. burn(s) and bone fracture(s)) or indicated frequent and repetitive PD use (e.g. leaving multiple marks on the child’s body or marks in different stages of healing) as highly unacceptable. Additionally, hitting the child’s head was considered highly unacceptable across all 3 views. On the other hand, these mothers perceived withdrawing privileges, and withdrawing attention or imposing consequences in short durations as highly acceptable parent discipline behaviors.

The following are 3 factor narratives, each describing a viewpoint on PD and abuse differentiation. The factor narratives begin with a brief introduction of the Chinese American mothers who defined them. Factors were interpreted with a focus on patterns and rankings of PD domains. Qualitative data from the post-sort interviews were integrated to enhance interpretation of viewpoints. Comparisons between factors are supplemented by the distinguishing statements that were ranked most differently in one factor compared to other factors based on normalized statement z scores. These distinguishing statements were organized by factor and PD domain, and are listed in Table 5.1.4. Select sorting statements may be incorporated in the narrative to enhance interpretation; the ranking for these statements will be noted in brackets (e.g. [+3] denotes the statement ranked “+3” on the continuum ranging from “Most Unacceptable, -6” to “Most Acceptable, +6.”)

Factor 1. This viewpoint was endorsed by 3 foreign-born and 2 US-born Chinese American mothers, and explained 25% of the study variance. These mothers and their children were younger than those defining other factors. They also had the least “Unacceptable” statements (44.60 versus 55.33 for Factor 2 and 48.00 for Factor 3) and most “Not sure” statements (7.40 versus 4.33 for Factor 1 and 3.17 for Factor 2) in their initial 3-pile sorts. This group of mothers highly endorsed the use of spanking to discipline young children. Hitting the child on the buttocks [+5] or the palm [+4] with an open hand [+4] were highly acceptable.

*Sometimes, it is necessary to use physical [punishments].
It depends on the crime.*

Hitting with a designated object [+2] or objects less likely to cause injury [+3] were also acceptable. For these mothers, the acceptability of using food as a punishment depends on how it is exercised. For example, not allowing the child to have a snack [+5] was ranked highly acceptable, but not allowing the child to have food or drinks for a day [-6] anchors the definition for most unacceptable punishment behavior.

*You can't not feed your child. You are abusing your child
if you let them go hungry. (Foreign-born mother)*

These mothers also had a clear delineation between acceptable and unacceptable punishments based on parent's intention (e.g. punishing the child to release the parent's anger and frustration [-4]; punishing the child to change the child's behavior [+5]).

*You can't use the child to release your anger. That will
hurt the child and hurt their self-esteem. It needs to be
good for the child.*

Isolation or imposing consequences for long durations were highly unacceptable (e.g. putting the child in a dark basement for 2 hours [-5]).

Five to ten minutes are okay, but longer than that and the child will start getting scared.

Lastly, these mothers were indifferent towards the frequency of punishment use, although punishing the child daily remains unfavorable -3].

How often you punish the child really doesn't matter because it all depends. Some children need more discipline.

Factor 2. Three foreign-born Chinese American mothers defined this view, which explained 29% of the study variance. They were similar in age to those defining Factor 3. This group of mothers had the lowest number of “Acceptable” statements (11.33 versus 19.00 in Factor 1 and 19.83 in Factor 2) and highest number of “Unacceptable” statements (55.33 versus 44.90 for Factor 1 and 48.00 for Factor 2) in their initial 3-pile sort. These parents defined CPA based on injury outcomes. For these mothers, almost all signs of physical injuries were highly unacceptable (i.e. \leq -5”), expect causing the child to have red mark(s) [-1].

It's not acceptable to cause any injuries at all. That is not the goal of discipline.

Most physical punishment that involve the use of physical force was considered unacceptable, except hitting the child on the buttocks [+3].

Sometimes discipline is necessary, but we try not to hit our children because we know it is not acceptable in this country.

Privilege withdrawal, and isolation and attention withdrawal in short durations were highly acceptable. Withdrawing attention in long durations was also

considered acceptable for these mothers (e.g. ignoring the child for 2 hours [+4]; locking the child in a room for 2 hours [+3]). For these mothers, neither parent intent for the punishment or the frequency of the punishment affected their perceptions of whether PD was acceptable or unacceptable. The acceptability of using food as a punishment depended on how it was exercised. Similar to the mothers in Factor 1, these mothers disapproved of withholding food or drinks for a day [-4]. However, they expressed force-feeding the child his/her meal [+5] and not allowing the child to have a meal [+4] as acceptable.

You cannot use food to control or punish children, but sometimes you have to watch how much they eat or what they eat for their health.

Factor 3. There were 6 US-born Chinese American mothers who identified with this view, which explained 21% of the study variance. This group had the least “Not Sure” statements (3.17 versus 7.40 for Factor 1 and 4.33 for Factor 2) in their initial 3-pile sort. This group viewed hitting the child invariably unacceptable, and they also disapproved of prolonged isolation.

Any hitting or causing injuries are not acceptable.

Sometimes, the non-physical stuff are just as bad, and it can't be long term.

On the other hand, punishing the child under positive intention anchors the definition for most acceptable parent discipline behavior (e.g. punishing the child to teach the child a lesson [+6] or change the child's behavior [+5]).

Whatever it is, as long as the child is learning, that's the most important part.

These mothers also believed frequent punishments were acceptable (e.g. punishing the child daily [+4], weekly [+4], monthly [+4], or a few times a year [+4]).

How often you punish your children is fine because it really depends on what they did.

For this group, privilege withdrawal was the optimal discipline strategy.

The acculturation levels of Chinese American mothers defining each factor are summarized in Table 5.1.5. Statistical comparisons of acculturation variables found a significant difference in generational status across the 3 factors ($p=0.007$). Indeed, Factor 2 was purely endorsed by foreign-born Chinese American mothers and Factor 3 was purely endorsed by US-born mothers. A significant difference was also found in linear acculturation score across the 3 groups ($p=0.021$). However, post hoc analysis did not reveal significant results, which was likely a result of insufficient power. There were no significant differences in orthogonal acculturation across factors.

As is common to Q-studies, the acculturation levels of participants defining each factor were compared descriptively. Factor 1 was defined by a mix of foreign-born and US-born mothers, while Factor 2 was defined by foreign-born mothers only and Factor 3 was defined by US-born mothers only. In terms of linear acculturation, those defining Factor 1 had a mean acculturation score of 2.57 ($SD=0.62$); those who defined Factor 2 were least acculturated ($M=2.05$, $SD=0.26$), and those who defined factor 3 were most acculturated ($M=3.45$, $SD=0.46$).

For orthogonal acculturation, $\geq 50\%$ of Chinese American mothers defining each factor were Bicultural in the Values and Behavior domain. However, Factor 2

(i.e. foreign-born mothers only) did not have any mothers who were Western-identified and Factor 3 (i.e. US-born mothers only) did not have any mothers who were Asian-identified. In terms of Self-Identity, mothers in Factor 1 reported being Asian self-identified (40%), Western self-identified (20%), or Bicultural self-identified (40%). Mothers in Factor 2 reported being Asian self-identified (66.67%) or Bicultural self-identified (33.33%). Lastly, mothers in Factor 3 reported being Western self-identified (16.67%) or Bicultural self-identified (83.33%). These descriptive comparisons of orthogonal acculturation showed that Factor 1 included Chinese American mothers from a broad range of acculturation, Factor 2 included a higher proportion of Asian- or Bicultural- identified Chinese American mothers, and Factor 3 included a higher proportion of Western or Bicultural-identified Chinese American mothers.

Table 5.1.1 Acculturation Levels by Generational Status

	1 st Generation (n=20)	≥2 nd Generation (n=15)	<i>p</i> -value
Mean linear acculturation score* (SD)	2.19 (0.34)	3.40 (0.34)	<0.001
Orthogonal acculturation for Values, n(%)			ns
Asian	9 (45.00)	7 (46.67)	
Western	1 (5.00)	3 (20.00)	
Bicultural	10 (50.00)	5 (33.33)	
Orthogonal acculturation for Behavior, n(%)			0.005
Asian	4 (20.00)	1 (6.67)	
Western	0 (0.00)	6 (40.00)	
Bicultural	16 (80.00)	8 (53.33)	
Orthogonal acculturation for Self-Identity, n(%)			<0.001
Asian self-identified	12 (60.00)	0 (0.00)	
Western self-identified	2 (10.00)	1 (6.67)	
Bicultural, Asian self-identified	3 (15.00)	0 (0.00)	
Bicultural, Western self-identified	0 (0.00)	2 (13.33)	
Bicultural, Bicultural self-identified	3 (15.00)	12 (80.00)	

Note: 1st Generation = Foreign-Born; ≥2nd Generation = US-Born

* Linear acculturation score ranges from 1 to 5. Higher score indicates higher acculturation.

Table 5.1.2 Characteristics of Chinese American Mothers in Full Sample and by Factor

	Full Sample (n=35)	Factor 1 (n=5)	Factor 2 (n=3)	Factor 3 (n=6)
<i>Demographic characteristics</i>				
Mean age in years (SD)	38.00 (4.28)	34.00 (1.41)	37.00 (7.00)	37.17 (2.32)
Generational status, n(%)				
1 st Generation (Foreign-born)	20 (57.14)	3 (60.00)	3 (100.00)	0 (0.00)
≥2 nd Generation (US-born)	15 (42.86)	2 (40.00)	0 (0.00)	6 (100.00)
Mean number of years residing in the US* (Range)	12.45 (2-33)	6.67 (2-15)	9.00 (3-13)	N/A
Country of family origin, n(%)				
China	25 (71.43)	4 (80.00)	3 (100.00)	4 (66.66)
Taiwan	3 (8.57)	0 (0.00)	0 (0.00)	1 (16.67)
Hong Kong	5 (14.29)	1 (20.00)	0 (0.00)	0 (0.00)
Family originated from different countries	2 (5.71)	0 (0.00)	0 (0.00)	1 (16.67)
Mean number of children (Range)	1.97 (1-3)	2.20 (2-3)	1.67 (1-2)	1.83 (1-2)
Mean age of all children in household (SD)	4.51 (1.49)	3.40 (0.65)	4.00 (1.00)	4.08 (1.11)
Mean number of people in household (Range)	4.20 (3-6)	4.60 (4-6)	4.67 (3-6)	3.83 (3-4)
<i>Sorting characteristics</i>				
Mean number of statements in the initial 3-pile sort (SD)				
“Acceptable” statements	15.80 (9.02)	19.00 (7.75)	11.33 (3.21)	19.83 (18.08)
“Not sure” statements	5.34 (4.68)	7.40 (4.88)	4.33 (1.15)	3.17 (2.48)
“Unacceptable” statements	49.86 (10.23)	44.60 (3.91)	55.33 (3.79)	48.00 (18.64)

* Foreign-born Chinese American mothers only

Table 5.1.3 Statements ranked “Highly Unacceptable” and “Highly Acceptable” across All Factors

Domain (Sub-Domain)	Statement
<i>“Highly Unacceptable” Statements*</i>	
Behavior (Physical Punishment); Delivery (Anatomical Location)	Hitting the child on the head
Behavior (Physical Punishment); Outcome (Injury)	Causing the child to have bone fracture(s)
	Causing the child to bleed
	Causing the child to have burn(s)
	Causing the child to have swelling/welts
Behavior (Physical Punishment); Outcome (Severity)	Causing the child to have 2 to 5 marks on the body
	Causing the child to have more than 5 marks on the body
Pattern of Use (Frequency); Outcome (Severity)	Causing the child to have marks in different stages of healing
<i>“Highly Acceptable” Statements**</i>	
Behavior (Withdraw Privilege)	Not allowing the child watch television
	Taking away the child's favorite item/ toy
Pattern of Use (Short Duration); Behavior (Withdraw Attention)	Putting the child in a time-out chair for 5 minutes
	Ignoring the child for 5 minutes
Pattern of Use (Short Duration); Behavior (Imposed Consequence)	Making the child stand facing a wall for 5 minutes

Note: Rankings range from “Most Unacceptable, -6” to “Most Acceptable, +6”

* Ranked “-4” or lower across all viewpoints

** Ranked “+4” or higher across all viewpoints

Table 5.1.4 Distinguishing Statements by Factor

			Statement Ranking		
	Domain (Sub-Domain)	Statement	Factor 1	Factor 2	Factor 3
Factor 1 (n=5)	Delivery (Anatomical Location)	Hitting the child on the palms	+4	+1	0
		Hitting the child on the thighs	+4	-3	-1
	Delivery (Tool)	Hitting the child with an open hand	+4	-3	-1
	Behavior (Physical Punishment)	Taking the child's clothes off before hitting the child	+2	-4	-2
	Behavior (Imposed Consequence)	Making the child stand facing a wall for 2 hours*	-2	+2	0
		Making the child kneel for 2 hours*	-4	0	0
	Behavior (Isolation)	Putting the child in a dark basement for 5 minutes*	-2	+3	+2
		Making the child stand outside the house for 5 minutes*	-1	+4	+2
		Putting the child in a dark basement for 2 hours*	-5	-3	-3
		Making the child stand outside the house for 2 hours*	-5	0	-2
Factor 2 (n=3)	Behavior (Withdraw Attention)	Ignoring the child for 2 hours*	0	+4	0
	Behavior (Use of Food)	Force-feeding the child the rest of his/her meal	0	+5	0
	Behavior (Isolation)	Locking the child in a room for 5 minutes*	+1	+5	+3
		Locking the child in a room for 2 hours*	-3	+3	-1
	Behavior (Physical Punishment)	Grabbing the child and holding the child tightly	+3	-1	+3
		Cutting the child's hair	+1	-1	+2
		Pulling on the child's ear	+2	-2	+1
	Outcome (Severity)	Causing the child to have a single mark on the body	-2	-4	-2
Factor 3 (n=6)	Behavior (Withdraw Privilege)	Not allowing the child to play with friends	+3	+2	+6
	Pattern of Use (Frequency)	Punishing the child daily	-3	-4	+4
		Punishing the child weekly	-1	-3	+4
		Punishing the child monthly	0	-2	+4
		Punishing the child a few times a year	+1	-1	+4
	Delivery (Anatomical Location)	Hitting the child on the buttocks	+5	+4	-1
	Delivery (Tool)	Hitting the child with objects that are less likely to cause injury	+3	+2	0
		Hitting the child with the same designated object every time	+2	0	-3
	Behavior (Physical Punishment)	Tying the child onto a chair	0	0	-3
Shaking the child vigorously		0	-2	-4	

Note: Rankings range from "Most Unacceptable, -6" to "Most Acceptable, +6"; Delivery- and Outcome-related punishments also fall under Specific Behavior (Physical Punishment)

* These statements also relate to Pattern of Use (Duration)

Table 5.1.5 Acculturation Levels of Chinese American Mothers by Factor

	Factor 1 (n=5)	Factor 2 (n=3)	Factor 3 (n=6)	p-value
Generational status, n(%)				0.007
1 st Generation (Foreign-Born)	3 (60.00)	3 (100.00)	0 (0.00)	
≥2 nd Generation (US-Born)	2 (40.00)	0 (0.00)	6 (100.00)	
Mean linear acculturation score* (SD)	2.57 (0.62)	2.05 (0.26)	3.45 (0.46)	0.021
Orthogonal acculturation for Values, n(%)				ns
Asian	1 (20.00)	0 (0.00)	1 (16.67)	
Western	1 (20.00)	0 (0.00)	2 (33.33)	
Bicultural	3 (60.00)	3 (100.00)	3 (50.00)	
Orthogonal acculturation for Behavior, n(%)				ns
Asian	1 (20.00)	1 (33.33)	0 (0.00)	
Western	1 (20.00)	0 (0.00)	3 (50.00)	
Bicultural	3 (60.00)	2 (66.67)	3 (50.00)	
Orthogonal acculturation for Self-Identity, n(%)				ns
Asian self-identified	2 (40.00)	2 (66.67)	0 (0.00)	
Western self-identified	1 (20.00)	0 (0.00)	1 (16.67)	
Bicultural, Asian self-identified	0 (0.00)	0 (0.00)	0 (0.00)	
Bicultural, Western self-identified	1 (20.00)	0 (0.00)	1 (16.67)	
Bicultural, Bicultural self-identified	1 (20.0)	1 (33.33)	4 (66.66)	

* Linear acculturation score ranges from 1 to 5. Higher score indicates higher acculturation.

PART II. SPECIFIC AIM 2

(MANUSCRIPT THREE)

Pediatric Nurses' Views on Acceptable versus Unacceptable Discipline Behaviors:

A Q-Study

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ABSTRACT

Background. Nurses are mandated to report suspected cases of child maltreatment. However, it is unclear how nurses decide what constitutes child abuse or evidence for reporting. It is crucial to examine how nurses define various forms of child maltreatment, including child abuse and its differentiation from physical discipline, to enhance our services to families with young children.

Objective. The present study examined pediatric nurses' views on acceptable versus unacceptable discipline behaviors to better understand parent behaviors that nurses are likely to deem reportable to child protective services. **Methods.** Using Q-methodology, a convenience sample of 48 pediatric nurses from one urban medical center sorted 71 statements related to the behavior or outcome of punishing a child via the internet application, FlashQ. The statements were sorted on a predefined continuum ranging from "Most Unacceptable" to "Most Acceptable". By-person factor analysis was used to uncover groups of nurses with similar sorts and to generate a unique sort that represented the viewpoint of nurses in that group.

Results. Two distinct viewpoints were uncovered. Although there was consensus on what constitutes most acceptable and most unacceptable parent behaviors, nurses varied on their endorsement of using physical force as a form of discipline, suggesting a potential for discrepant tendencies to identify and report child abuse.

INTRODUCTION

Nurses in the United States are bound by law to report any “reasonable suspicion” of child maltreatment, including all forms of abuse and neglect. However, it is unclear how nurses define child abuse, a factor that likely influences their decision to report a suspected case of maltreatment. Some evidence suggests that nurses’ endorsement of physical discipline use may influence their decision to report, but we found no published studies directly examining nurses’ viewpoints on various discipline behaviors, including those that may be considered harsh or less socially acceptable. The purpose of this study is to explore what one group of mandated reporters, pediatric nurses, view as acceptable and unacceptable parent discipline behavior to set the stage for a better understanding of nurses’ decisions to report child abuse.

Professionals who are mandated reporters (e.g. law enforcement, teachers, social workers, healthcare providers) provide the majority of child maltreatment reports to child protection agencies (Flaherty, Sege, Mattson, & Binns, 2002). However, only 8.4% of these referrals come from healthcare providers, including nurses (Eisbach & Driessnack, 2010). To date, little is known about the factors that contribute to nurses’ suspicion, identification, or reporting of child maltreatment. In an integrative review of literature published between 1996 and 2007, Piltz and Wachtel (2009) found 17 studies that examined barriers that hinder nurses’ reporting of suspected child maltreatment; only 4 were conducted in the US. Findings from those studies (i.e. Adams, 2005; Flaherty et al., 2000; Limandri & Tilden, 1996; Smith, 2006) largely reflect the factors and challenges that healthcare

professionals face with suspected child maltreatment, namely insufficient knowledge and training, and difficulties identifying cases that lack overt signs of injury.

Although child maltreatment training can enhance identification and reporting, Paavilainen and colleagues (2002) suggest that knowledge of injury assessment and identification alone may not be sufficient to change reporting practices among nursing and medical staff. This is supported by Eisbach and Driessnack (2010), who found that nurses' reporting decisions are frequently complicated by the nature of the data presented to them. For example, while severe and suspicious injuries were found to warrant immediate reporting, nurses in their study described encountering numerous other cases in which signs and symptoms were less overt or were presented with only subjective data (e.g. child's disclosure of maltreatment). In these cases, intuition and biases may dictate reporting decisions (Ling & Luker, 2000).

Several other factors have shown to influence the suspicion, identification, and reporting of child abuse. Suspicion and intent to report have been positively associated with professional experience (Hansen, Bumby, Lundquist, Chandler, Le, & Futa, 1997), and with being white, born in the US, and disapproving of physical discipline use (Ashton, 2004; Ibanez, Borrego, Pemberton, & Terao, 2006). Patient ethnicity, family and case history, and clinician's familiarity with the client have also been found to influence reporting decisions (Flaherty et al., 2008; Jones et al., 2008; Zellman, 1992). Taken together, these findings suggest that nurses' definitions of child abuse vary and that child maltreatment suspicion, identification, or reporting

may be biased by nurses' characteristics, beliefs, or professional experience.

Therefore, it is imperative to examine how nurses define which parent behaviors constitute child abuse as these definitions are likely to drive reporting decisions.

The purpose of this study was to examine how pediatric nurses differentiate acceptable physical discipline from child abuse. This study is part of a larger examination of how mothers of Chinese descent living in the US differentiate physical discipline from child abuse and how those perspectives differ from those of mandated reporters. The study focuses on discipline and abuse of young children, age 3-6 years old. This age group was chosen based on national data showing that physical discipline use peaks for children between ages 4 and 5 years old (Straus & Stewart, 1999) and that nearly 80% of preschool-aged children are disciplined with spanking and slapping, a prevalence rate without marked change since 1975 (Zolotor, Theodore, Runyan, Chang, & Laskey, 2011).

METHODS

Research Design

This descriptive cross-sectional study used Q-methodology to explore what pediatric nurses view as acceptable and unacceptable discipline behaviors. Q-methodology uses a combination of qualitative and quantitative techniques to explore, analyze, and compare subjective viewpoints in a holistic manner (Akhtar-Danesh, Baumann, & Cordingley, 2008), and offers a unique and rigorous approach to empirically examine attitudes and perceptions. The advantage of using Q-methodology over other self-report strategies, such as Likert-type surveys, is that Q-

methodology allows participants to create their own meanings through the operational medium of a Q-sort (McKeown & Thomas, 1988). This bypasses potential cultural or response biases inherent in other self-report methods, where instruments are created based on theoretical formulations or researchers' operationalizations of constructs (Dennis, 1986).

A Q-study is performed in two sequential phases. First, a set of items relevant to the topic of interest, called a Q-set is compiled. Then, participants perform a Q-sort of the items, where they first sort the items into 3 piles (e.g. agree, not sure, and disagree), followed by a more detailed sort along a predefined continuum. By performing the Q-sort, participants create their own meanings and turn their subjective viewpoints into empirically measurable operant behaviors based on the pattern of their sorts.

Using by-person factor analysis, participants with similar viewpoints (i.e. sorting patterns) create a unique factor based on high correlations between their Q-sorts, and a composite Q-sort is generated for each factor to represent the overall viewpoint of participants in that factor (McKeown & Thomas, 1988). Major similarities and differences between viewpoints (i.e. across factors) can be explored by looking at consensus or distinguishing items, which are ranked similarly or differently across the continuum, respectively. Finally, participant characteristics may be compared across factors.

Q-methodology enables the systematic exploration of a variety of viewpoints about an issue, the identification of key areas that overlap or differ, and the examination of different characteristics of people who have similar or opposing

views (Akhtar-Danesh et al. , 2008). It also allows for exploring and explaining patterns in subjectivities, and generating new ideas and hypotheses (van Excel & de Graff, 2005). Importantly, the objective of Q-methodology is to sample the range and diversity of viewpoints, not the proportion of individuals endorsing each specific viewpoint (Cross, 2005). Therefore, the number of participants required is comparatively smaller than traditional quantitative studies, where 40 to 60 participants are considered more than adequate to elicit prevailing viewpoints (Brown, 1980).

Creating the Q-set

The Q-set is a set of items relevant to the topic of interest, usually in the form of written statements. In this study, the Q-set was elicited as part of the larger study of Chinese American mothers (n=11) using semi-structure interviews. Mothers were asked to provide examples of discipline behaviors commonly used to physically punish a child between ages 3-6, as well as behaviors or outcomes they may be considered abusive parenting. The first author, who is fluent in English, Cantonese, and Mandarin Chinese, conducted the interviews. Audio-recorded interviews were transcribed by certified transcriptionists, and interviews conducted in a Chinese language (i.e. 4 Mandarin, 1 Cantonese, and 1 Mandarin and English mixed) were translated into English and back-translated for accuracy.

Seventy-one statements were generated from the interviews, which represent a comprehensive, but non-exhaustive list of behaviors or outcomes related to physically punishing a child. The statements broadly fell under 5 domains (i.e. intention, pattern of use, specific behaviors, delivery, and outcome); some

domains were further divided into sub-domains. The statements were pilot tested by a parenting and child mental health expert and a forensic nursing expert to assure inclusiveness of statements and related domains. These domains and subdomains are described below. Examples of select statements are listed in Table 5.2.1.

Intention-related statements were statements that described the parent's rationale for using punishment and/or the parent's mental state at the time when punishment was exercised, which may be positive, negative, or equivocal. Statements related to pattern of use fell under 2 sub-domains, which included (1) Frequency (i.e. how often the child is punished), and (2) Duration (i.e. how long punishment lasts). Statements related to specific behaviors described the actual behavior that the parent used to punish the child, and were divided into 6 sub-domains: (1) Physical punishment (i.e. punishments that involve physical contact between parent and child), (2) Imposed consequence (i.e. punishments that involve the parent making the child do something), (3) Attention withdrawal (e.g. ignoring the child), (4) Privilege withdrawal (e.g. taking something away from the child), (5) Isolation (e.g. locking the child in a room), and (6) Use of food (e.g. withdrawing a meal).

Statements related to physical punishments (i.e. hitting) may also fall under the delivery or outcome domains. Delivery-related statements described how punishment was exercised, which were divided into 2 sub-domains: (1) Anatomical Location (i.e. the part of the child's body on which the child was hit), and (2) Tools (i.e. the object used to hit the child). Lastly, outcome-related statements described

signs of physical injuries sustained after punishment was exercised, and were divided into 2 sub-domains: (1) Injury (i.e. specific injury signs, such as a red mark or a bruise), and (2) Severity (i.e. the number of marks left on the child's body or marks in different stages of healing).

A statement may fall under one or more domains depending on its nature and scope. For example, the statement, "Making the child exercise for 5 minutes" was considered an imposed consequence in short duration and falls under both the Specific Behavior and Pattern of Use domains. The statements with corresponding domains were depicted in Figure 3.1.

Subjects and Setting

In September 2013, nurses at Johns Hopkins Hospital (Baltimore, MD) with at least 2 years of pediatric nursing experience were invited to perform a Q-sort and complete a demographic and nursing background survey via the internet application, FlashQ (Hackert & Braehler, 2007). Eligible nurses were recruited using flyers that provided a web link to the study. The study was completed anonymously, but nurses may provide an e-mail address if they wish to receive a \$25 online gift card. The study was approved by the Johns Hopkins Institutional Review Board.

Procedures

Nurses were prompted to sort the Q-set based on what they, as mandated reporters of child abuse, think are acceptable or unacceptable when punishing a child between ages 3 and 6 years old. Using a drag-and-drop interface, the statements were first sorted into 3 piles (i.e. acceptable, not sure, and

unacceptable), then along a 13-point continuum ranging from “Most Unacceptable, -6” to “Most Acceptable, +6” (see Figure 5.2.1). Nurses were also asked to explain why they think the statements they ranked “-6” and “+6” were most unacceptable and most acceptable, respectively. Lastly, nurses completed a demographic and nursing background questionnaire.

Analysis and Interpretation

Background variables and sorting characteristics (i.e. distribution of initial 3-pile sort and time to complete study) were analyzed with Stata®12 (StataCorp, 2011). Mean/mode substitution was used to handle minimal random missing data. By-person factor analysis was conducted using PQMethod 2.33 (Schmolck, 2013) with centroid factor extraction and Varimax rotation. A 2-factor solution (i.e. 2 distinct viewpoints) explaining 72% of the total variance was deemed most appropriate (Factor 1, 66% with an eigenvalue of 31.65; Factor 2, 6% with an eigenvalue of 2.71). In the remainder of this paper, the terms “factor” and “viewpoint” will be used interchangeably.

Defining sorts (i.e. individual sorts that best exemplify the sorting pattern of a viewpoint) were determined using methods similar to those described by Jordan, Capdevila, and Johnson (2005). In their study, Jordan and colleagues considered defining sorts as those that loaded at least 0.60 on one factor and less than 0.40 on all other factors. To enhance inclusion of viewpoints and number of defining sorts, those that loaded 0.70 or higher on one factor and less than 0.50 on the other factor were considered defining in this study.

Defining sorts in each factor were weighted based on their individual factor loading and combined to create a composite Q-sort. A normalized factor z-score for each statement was calculated to compose a full factor array, and a factor score ranging from “-6” to “+6” were assigned to each statement, which corresponds to their respective ranking on the composite Q-sort for that factor. The normalized factor z-scores and corresponding factor scores were used to determine consensus and distinguishing statements across the two factors. Qualitative interpretation was conducted to provide a holistic description of factor viewpoints. Nonparametric procedures (i.e. Fisher’s exact, Wilcoxin Mann-Whitney, and Spearman Rank Correlation) were used to compare characteristics of individuals defining each factor.

RESULTS

Forty-eight pediatric nurses participated in the study. The average time to complete the study was 49.25 minutes ($SD=41.56$). Mean age of the participants was 32.75 years ($SD=8.57$). The majority of the participants were female (93.75%), Caucasian/White (77.08%), non-Hispanic (93.75%), born in the US (97.92%), and did not have children (56.25%). The mean number of years working in pediatrics was 8.19 ($SD=6.89$). The majority was currently working as pediatric nurses (93.75%) and had a BSN as their highest nursing degree (81.25%). Twenty-six nurses (54.17%) reported having ever received child maltreatment training.

In the initial 3-pile sort, the mean number of statements in the “Acceptable”, “Not sure”, and “Unacceptable” piles were 16.81 ($SD=6.21$), 8.87 ($SD=6.64$), and

45.31 ($SD=9.30$), respectively. Demographic, nursing, and sorting characteristics of the full sample and participants defining each factor are summarized in Table 5.2.2.

Of the 48 nurses who participated in this study, 27 provided defining sorts (Factor 1, $n=21$; Factor 2, $n=6$), meaning these two groups of nurses expressed two most distinctly different viewpoints based on the pattern of their sorts. Statistical comparisons showed that nurses in Factor 2 were significantly younger ($Z=2.141$, $p=0.03$). The difference in the mean number of years worked in pediatrics between nurses in Factor 1 ($M=9.33$, $SD=8.15$) and Factor 2 ($M=4.00$, $SD=1.09$) was approaching significance ($Z=1.94$, $p=0.052$), and there was a strong correlation between age and years worked in pediatrics ($rs(27)=0.85$, $p<0.001$). There were no statistically significant differences in other demographic and nursing background characteristics. In terms of sorting characteristics, nurses in Factor 2 allocated more “Acceptable” ($Z=2.79$, $p<0.01$) and “Not Sure” ($Z=2.92$, $p<0.01$) statements, and less “Unacceptable” statements ($Z=-3.36$, $p<0.001$) in the initial 3-pile sort compared to nurses in Factor 1, meaning nurses in Factor 2 found the statements to be more acceptable overall.

Twenty-one nurses did not provide a defining sort. Of those, 15 nurses provided confounding sorts, defined as loading 0.50 or higher on both factors. The high number of confounding sorts suggests a possible hybrid view between Factors 1 and 2 (Webler, Danielson, & Tuler, 2007). However, this view was not distinct enough to form a factor on its own (Taylor, 2007). The remaining 6 nurses were considered non-loaders (i.e. loaded less than 0.70 on both factors and less than 0.50 on at least one factor) whom did not strongly identify with either or both of the

factors. Since the purpose of Q-methodology is to identify and examine differences in prevailing viewpoints, emphasis will be placed on findings from the two factors uncovered.

Factor Consensus

There was a moderate correlation between the two significant factors ($r=0.61$), indicating the viewpoints on differentiating physical discipline from abuse among nurses defining the two factors converged in certain ways. Of the 71 statements related to the behavior or outcome of punishing a child between ages 3 and 6 years old, 28 statements were considered not statistically significantly different between the 2 factors based on their normalized factor z-scores at $p>0.05$, meaning they were consensus statements and were ranked similarly across both factors. When examining the composite Q-sort of both viewpoints, 17 of the consensus statements were ranked “-4” or lower (i.e. highly unacceptable) or “+4” or higher (i.e. highly acceptable) in both viewpoints. These statements and their respective domains and factor scores are listed in Table 5.2.3.

Seven statements were ranked “-4” or lower in both viewpoints, meaning they were uniformly ranked as highly unacceptable among nurses who defined the two factors. The majority of these statements were specific behaviors related to physical punishments (e.g. hitting and shaking the child) and with outcomes related to overt signs of severe physical injuries (e.g. burns, bone fractures, and bruises). In addition, “Causing the child to have marks in different stages of healing”, which suggests a combination of high frequency in pattern of use and severity in injury outcome, was also considered highly unacceptable in both viewpoints.

Alternatively, 10 statements were ranked “+4” or higher in both viewpoints and represent statements that were considered highly acceptable. These statements described punishments that relate to specific behaviors with imposed consequences (e.g. doing more homework and doing household chores) or involved parent’s withdrawal of a privilege or their attention, and punishments used in short durations (i.e. 5 minutes). One statement related to positive intention (i.e. “Punishing the child to teach the child a lesson”) was also considered highly acceptable in both viewpoints.

Factor Comparison

Although the two factors overlapped in many ways (e.g. as exemplified by their moderate correlation), they remained as distinct viewpoints because there were important disagreements on where certain statements were placed along the continuum. To compare the two factors, distinguishing statements were used to identify individual statements or statement domains that were sorted differently between the 2 viewpoints. The top 10 statements with greatest difference in normalized factor z-scores and a rank difference of 5 or higher between factors are listed in Table 5.2.4. Of those, 7 statements were ranked less acceptable in Factor 1, which were all specific behaviors related to physical punishments (i.e. hitting) and related to how physical punishment was delivered (i.e. tools used or anatomical location on which hitting was exercised). Three statements were ranked less acceptable in Factor 2, and included specific behaviors related to the use of food as punishment and negative parent intent when punishing a child (i.e. “Punishing the child to make the child afraid”).

When sorting patterns were compared by statement domains, statements related to punishments used in long durations, whether it was related to imposed consequences, isolation, or attention withdrawal, were ranked more unacceptable by nurses in Factor 2 as compared to those in Factor 1. In addition, all statements that described parent intentions that are considered negative (e.g. "Punishing the child to release the parent's anger and frustration" and "Punishing the child to make the parent feel better") or equivocal (e.g. "Punishing the child to control the child" and "Punishing the child to get the child's attention") were also ranked less acceptable in Factor 2. Of note, nurses in Factor 2 ranked all statements related to the use of food (e.g. "Force-feeding the child the rest of his/her meal" and "Putting hot sauce in the child's mouth") more unacceptable as compared to nurses in Factor 1. "Not allowing the child to have a meal" was also considered the most unacceptable form of punishment ["-6"], as one nurse in Factor 1 wrote, *"It is never acceptable to make a child go hungry... A child needs to know they have their basic needs met and someone they can trust."*

Alternatively, physical punishment in the form of hitting the child, regardless of how it was delivered, was considered most unacceptable to nurses in Factor 1, as one nurse in Factor 1 noted, *"You cannot hit a child under any circumstances – it's abuse."* Nurses in Factors 1 and 2 expressed different opinions about the use of hitting to punish a child based on several domains. For example, while nurses in Factor 2 viewed that it is acceptable to hit the child with certain tools (e.g. "Hitting the child with objects that are less likely to cause injury" ["+4"]; "Hitting the child with the same designated object every time ["+5"]"), nurses in Factor 1 viewed it is

unacceptable to hit the child with any objects (i.e. rankings of all tools-related statements ranged from “Hitting the child with an open hand” [“-2”] to “Hitting the child with a fist” [“-4”]).

Nurses in Factor 1 also found it more unacceptable to hit the child on any part of the body compared to nurses in Factor 2. However, nurses in both groups agreed that hitting central parts of the body (e.g. head, chest, and face) was more unacceptable than distal parts of the body (e.g. arms, palms, and buttocks). Similarly, statements related to the frequency of punishment (i.e. daily, weekly, monthly, or few times a year) were ranked differently between viewpoints, where all frequency-related statements were less acceptable to nurses in Factor 2 than nurses in Factor 1. However, both groups of nurses agreed that lower frequencies (i.e. monthly and few times a year) are more acceptable than higher frequencies.

The acceptability of using physical force to punish a child drew an important distinction between Factors 1 and 2. While nurses in Factor 1 viewed all forms of punishment involving use of physical force as more unacceptable than any other discipline strategies, nurses in Factor 2 viewed certain uses of physical force were more acceptable in comparison to other discipline strategies (e.g. use of food). Therefore, nurses defining Factors 1 and 2 provided two separate viewpoints despite the similarities they shared.

DISCUSSION

Consistent with findings in the existing literature, nurses in this study generally agreed that physical punishments that result in overt and severe signs of injury are most unacceptable. As previously discussed, nurses reported being

confident in identifying and reporting child abuse when clear signs of physical injuries are evident. Ample evidence also supports that reporting is most likely when the use of physical violence that presents imminent physical harm to young children is involved (Ashton, 1999). Therefore, discipline behaviors that result in serious physical injuries take precedence over other behaviors or outcomes of punishment in raising suspicion and prompting reports of child maltreatment. Similarly, nurses also agreed on the most acceptable forms of discipline behaviors, i.e. punishments that are short in duration, involve withdrawal of privilege or attention, and impose consequences that do not inflict bodily harm.

Despite these similarities, two unique viewpoints were identified that differentiated acceptable and unacceptable discipline behaviors. These included differences in how nurses (a) viewed hitting or inflicting immediate physical pain as more unacceptable than all other forms of punishments (Factor 1) and (b) viewed punishments that incited fear and uncertainty (e.g. punishments that are long in duration, use of food as punishment, and causes the child to be afraid) as more unacceptable than hitting (Factor 2). There are two possible explanations for these differences.

First, different viewpoints on acceptable and unacceptable discipline behaviors may stem from individuals abiding to different definitions of child physical abuse. For example, the group of nurses who believed hitting was most unacceptable compared to other forms of punishments (Factor 1) appeared to operationalize child physical abuse based on the US federal definition, which characterizes child physical abuse as non-accidental physical injuries, ranging in

severity from minor marks and bruising to death, as a result of various modes of infliction, such as hitting with a hand, stick, strap, or other object, that may or may not have been intentional (Children's Bureau, 2003). Based on this definition, the acceptability of discipline behaviors are clear, i.e. all forms of hitting are considered abusive and unacceptable.

The viewpoint expressed by nurses in Factor 2 (i.e. discipline behaviors that incite fear and uncertainty as more unacceptable than hitting the child) better converged with international norms, which define physical abuse as "actual or potential physical harm from an interaction or lack of an interaction, which is reasonably within the control of a parent or person in the position of responsibility, power or trust" (World Health Organization, 1999, pp.15). By this definition, physical contact or pain infliction are not necessary for physical abuse to occur. Instead, discipline behaviors that negate basic responsibilities of caring for a child (e.g. not feeding a child), misuse of caregiver power and authority (e.g. using punishments in long durations), and compromise the trust between the child and the caregiver (e.g. causing the child to be afraid) are considered unacceptable based on their capacity to induce potential harm. Moreover, within these international norms, hitting and other forms of physical contact may be acceptable based on caregiver intent and when exercised in a conceivably controlled manner (e.g. hitting the child with a designated object or with objects less likely to cause injury).

The second explanation relates to the nurses' personal and professional characteristics. Nurses defining Factor 1 were significantly older than nurses in Factor 2, and their difference in number of years worked in pediatrics was

marginally significant ($p < .06$). Inferential comparisons did not uncover other significant finding, which might have been due to small sample sizes. However, based on descriptive comparisons, it appears that the two viewpoints expressed by nurses may be associated with differences in their background. Specifically, a higher proportion of nurses who were white/Caucasian, had children of their own, and received child maltreatment training were represented in Factor 1. These differences are consistent with prior research demonstrating differences in reporting decisions by reporters' personal and professional backgrounds (e.g. ethnicity, professional experience, training, and immigration status; Ashton, 2004; Hansen, Bumby, Lundquist, Chandler, Le, & Futa, 1997; Ibanez, Borrego, Pemberton, & Terao, 2006).

The results presented underscore the need for additional research on how nurses differ on perceptions of acceptable and unacceptable discipline behaviors and set the stage for examining the extent to which these differences affect reporting decisions when overt injuries are not apparent. Research on factors that lead to differing viewpoints is also important as those may help to clarify essential training content for all nurses working with parents or minor children.

There are several important study limitations that warrant discussion. This study used a convenience sample from one urban medical institution. Their perspectives may not be representative of pediatric nurses working in other settings or regions. Replication of this study with diverse samples of nurses is recommended. The use of an internet Q-sort application (FlashQ) to obtain data

anonymously and online enhances the feasibility of collecting this data across many different samples of nurses while reducing the risk for social desirability bias.

A second limitation was the use of a Q-set for nurses that was originally generated from interviews with Chinese American mothers. This study was part of a larger study of how Chinese-American mothers and mandated reporters differ in their perspectives of what constitutes acceptable and unacceptable discipline behaviors. Therefore, some statements included in the Q-set may have more relevance for Chinese parents than for the nurses (e.g., punishments involving the use of food). However, it is important for nurses to be cognizant of different parenting practices across cultures, and assess their acceptability and potential for child abuse reporting. Indeed, a more culturally comprehensive Q-set may generate even more distinct viewpoints on differentiating physical discipline from child abuse.

Finally, data was not obtained from the nurses on their experiences with reporting suspected cases of child abuse or whether they personally experienced or endorse physical discipline use. These types of experiences could have affected the different viewpoints.

An important strength of this study was the use of the Q-methodology to examine a topic highly vulnerable to social desirability bias. Q-methodology has been identified as a particularly useful strategy for exploring human perspectives (Chinnis, Summers, Doerr, Paulson, & Davis, 2001). The fine line that demarcates acceptable from unacceptable discipline behaviors can be nuanced and vague. A strength of Q-methodology was its ability to guide the nurses in creating their own

meanings for the phenomenon based on their own internal frames of reference (McKeown & Thomas, 1988). We believe this study design can serve as a model for understanding perceptions of acceptable and unacceptable parent discipline behaviors across multiple cultures and groups, which is particularly important in a country of immigrants.

CONCLUSION

The two distinct viewpoints uncovered in this study suggest that nurses have different opinions about acceptable and unacceptable discipline behaviors, which creates a potential for discrepant tendencies to identify and report child abuse. Reporting decisions can be life changing for families. As healthcare professionals who are also mandated reporters of child maltreatment, nurses need to have consistent views on what is considered acceptable and unacceptable parenting behaviors requiring a report for child protective services. The stakes are too high for families of young children who could risk stigma and potential loss of their children due to biased or idiosyncratic assessments of child abuse by mandated reporters.

[illegible]

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Table 5.2.1 Q-Sample Domains and Statement Samples

Domains	Subdomains	Examples
Intention	Positive	<i>"Punishing the child to teach the child a lesson"</i>
	Negative	<i>"Punishing the child to release the parent's anger and frustration"</i>
	Equivocal	<i>"Punishing the child to make the child work harder"</i> <i>"Punishing the child to control the child"</i>
Pattern of Use	Frequency	<i>"Punishing the child weekly"</i> <i>"Punishing the child monthly"</i>
	Duration*	<i>"Putting the child in a dark basement for 5 minutes"</i> <i>"Putting the child in a dark basement for 2 hours"</i>
Specific Behaviors	Physical Punishment	<i>"Pulling on the child's ear"</i> <i>"Shaking the child vigorously"</i>
	Imposed Consequences	<i>"Making the child do household chores"</i>
	Withdraw Attention	<i>"Ignoring the child for 2 hours"</i>
	Withdraw Privilege	<i>"Taking away the child's favorite item/ toy"</i>
	Isolation	<i>"Locking the child in a room for 5 minutes"</i>
	Use of Food	<i>"Not allowing the child to have a snack"</i> <i>"Putting hot sauce in the child's mouth"</i>
Delivery	Anatomical Location	<i>"Hitting the child on the head"</i> <i>"Hitting the child on the buttocks"</i>
	Tools	<i>"Hitting the child with an open hand"</i> <i>"Hitting the child with the same designated object every time"</i>
Outcome	Injury	<i>"Causing the child to bleed"</i> <i>"Causing the child to have bruise(s)"</i>
	Severity	<i>"Causing the child to have 2 to 5 marks on the body"</i>

* 17 statements described specific behaviors in 2 different durations (i.e. 5 minutes and 2 hours)

Table 5.2.2 Background and Sorting Characteristics of Pediatric Nurses

	Full Sample (n=48)	Factor 1 (n=21)	Factor 2 (n=6)
<i>Demographic characteristics</i>			
Mean age in years (SD)	32.75 (8.57)	33.19 (8.40)	27.17 (2.64)
Females, n(%)	45 (93.75)	20 (95.24)	5 (83.33)
Race, n(%)			
Black/African American	6 (12.50)	3 (14.29)	1 (16.67)
Caucasian/White	37 (77.08)	15 (71.43)	3 (50.00)
Asian/Pacific Islander	5 (10.42)	3 (14.29)	2 (33.33)
Hispanic, n(%)	3 (6.25)	1 (4.76)	0 (0.00)
Born in the US, n(%)	47 (97.92)	21 (100.00)	5 (83.33)
Have children, n(%)	21 (43.75)	11 (52.38)	1 (16.67)
<i>Nursing background</i>			
Mean years working in pediatrics (SD)	8.19 (6.89)	9.33 (8.15)	4.00 (1.09)
Current job position, n(%)			
Pediatric nurse	45 (93.75)	20 (95.24)	5 (83.33)
Pediatric nurse practitioner	2 (4.17)	0 (0.00)	1 (16.67)
Peds Nurse Informatics Coordinator	1 (2.08)	1 (4.76)	0 (0.00)
Highest nursing degree obtained, n(%)			
Associates Degree in Nursing	4 (8.33)	2 (9.52)	0 (0.00)
Bachelor of Science in Nursing	39 (81.25)	17 (80.95)	5 (83.33)
Master of Science in Nursing	5 (10.42)	2 (9.52)	1 (16.67)
Ever received child abuse training, n(%)	26 (54.17)	12 (57.14)	3 (50.00)
<i>Sorting characteristics</i>			
Mean number of statements in 3-pile sort (SD)			
“Acceptable” statements	16.81 (6.21)	15.48 (4.73)	24.00 (6.32)
“Not sure” statements	8.87 (6.64)	7.14 (6.66)	14.00 (1.67)
“Unacceptable” statements	45.31 (9.30)	48.38 (6.72)	33.00 (6.03)

Table 5.2.3 Statements ranked “Highly Unacceptable” or “Highly Acceptable” in Both Factors

Statement	Domain (Sub-Domain)	Factor Score	
		F1	F2
“Highly Unacceptable” Statements (factor score of “-4” or lower in both factors)			
Causing the child to have bone fracture(s)	Behavior (Physical Punishment) Outcome (Injury)	-6	-6
Causing the child to have swelling/welts	Behavior (Physical Punishment) Outcome (Injury)	-6	-6
Causing the child to have burn(s)	Behavior (Physical Punishment) Outcome (Injury)	-6	-5
Causing the child to have scar(s)	Behavior (Physical Punishment) Outcome (Injury)	-6	-5
Causing the child to have bruise(s)	Behavior (Physical Punishment) Outcome (Injury)	-5	-6
Shaking the child vigorously	Behavior (Physical Punishment)	-5	-4
Causing the child to have marks in different stages of healing	Pattern of Use (Frequency) Outcome (Severity)	-5	-4
“Highly Acceptable” Statements (factor score of “+4” or higher in both factors)			
Putting the child in a time-out chair for 5 minutes	Behavior (Withdraw Attention) Pattern of Use (Short Duration)	+6	+6
Not allowing the child watch television	Behavior (Withdraw Privilege)	+6	+6
Taking away the child's favorite item/ toy	Behavior (Withdraw Privilege)	+6	+5
Making the child do more homework	Behavior (Imposed Consequence)	+6	+4
Making the child do household chores	Behavior (Imposed Consequence)	+5	+6
Making the child stand facing a wall for 5 minutes	Behavior (Imposed Consequence) Pattern of Use (Short Duration)	+5	+5
Punishing the child to teach the child a lesson	Intention (Positive)	+5	+4
Not allowing the child to play with friends	Behavior (Withdraw Privilege)	+4	+6

Table 5.2.3 (cont'd) Statements ranked "Highly Unacceptable" or "Highly Acceptable" in Both factors

Ignoring the child for 5 minutes	Behavior (Withdraw Attention) Pattern of Use (Short Duration)	+4	+5
Making the child exercise for 5 minutes	Behavior (Imposed Consequence) Pattern of Use (Short Duration)	+4	+5

Note: Rankings range from "Most Unacceptable, -6" to "Most Acceptable, +6"

Table 5.2.4 Top 10 Distinguishing Statements with Factor Score Difference ≥ 5

Statement	Domain (Sub-Domain)	Factor Score		Rank Difference
		F1	F2	
Statements Ranked Less Acceptable in Factor 1				
Hitting the child with the same designated object every time	Behavior (Physical Punishment) Delivery (Tools)	-3	+5	8
Hitting the child with objects that are less likely to cause injury	Behavior (Physical Punishment) Delivery (Tools)	-3	+4	7
Hitting the child on the face	Behavior (Physical Punishment) Delivery (Anatomical Location)	-4	+2	6
Hitting the child on the head	Behavior (Physical Punishment) Delivery (Anatomical Location)	-4	+2	6
Hitting the child on the chest	Behavior (Physical Punishment) Delivery (Anatomical Location)	-4	+2	6
Hitting the child with an open hand	Behavior (Physical Punishment) Delivery (Tools)	-2	+3	5
Hitting the child on the arms	Behavior (Physical Punishment) Delivery (Anatomical Location)	-2	+3	5
Statements Ranked Less Acceptable in Factor 2				
Not allowing the child to have a meal	Behavior (Use of Food)	0	-6	6
Punishing the child to make the child afraid	Intention (Negative)	0	-5	5
Not allowing the child to have a snack	Behavior (Use of Food)	+5	0	5

Note: Rankings range from “Most Unacceptable, -6” to “Most Acceptable, +6”

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PART III. SPECIFIC AIM 3

(MANUSCRIPT FOUR)

Differentiating Physical Discipline from Abuse:

Q findings from Chinese American Mothers and Pediatric Nurses

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ABSTRACT

The perception and use of physical discipline (PD) is culture-based, and the differentiation between PD and abuse is subjective and complex. The purpose of this study was to understand how Chinese American mothers and one group of mandated reporters of child abuse (i.e., pediatric nurses) differentiate PD from abuse. Using Q-methodology, 3 viewpoints on PD and abuse differentiation were uncovered from a sample of 35 Chinese American mothers and 48 pediatric nurses. Although there was wide consensus on the most acceptable and most unacceptable parent discipline behaviors across the 3 views, the acceptability of punishments differed by their potential to inflict injury, pain, or incite fear and uncertainty. This was the first study to examine PD and abuse differentiation based on definable domains of PD (i.e. specific behavior, intention, delivery, outcome, and pattern of use). Findings point to nuanced by important differences in how some mothers and nurses differentiate abuse from acceptable discipline and the potential for using Q-methodology for exploring PD and abuse differentiations across diverse cultural, social, and professional groups.

INTRODUCTION

The reported child maltreatment rate among Asian Americans is lower than the national average (Zhai & Gao, 2011). However, Chinese American parents reported for child maltreatment are more likely to be reported for physical abuse and at rates greater than those for the general population (35.5% versus 18.9% in non-Asian groups; Rhee, Chang, Weaver, & Wong, 2008). It is possible that this higher rate of reported physical abuse among immigrant Chinese families reflects their child-rearing practices and long-established cultural beliefs that endorse the use of physical discipline (PD; Rhee et al., 2008). Indeed, immigrant families have been identified as being at risk for getting involved with the child welfare system because of cultural differences in parenting rather than an actual intent to harm their children (Department of Health and Human Services [DHHS], 2001). However, no known study has directly examined how immigrant parents differentiate PD from abuse, and whether those differentiations differ from those of mandated reporters of child abuse.

The purpose of this study was to understand how Chinese American mothers and one group of mandated reporters of child abuse (i.e. pediatric nurses) differentiate PD from abuse. These variables were examined using Q-methodology to holistically capture how parents and pediatric nurses differentiate varying types and levels of acceptable and unacceptable discipline behaviors. Further, Chinese American mothers' levels of acculturation were measured to explore the influence of acculturation on PD and abuse differentiation.

BACKGROUND

The perception and use of physical discipline (PD) are deeply grounded in the context of culture (Douglas, 2006), yet studies examining PD use and outcomes in culturally diverse populations are relatively scarce (Ferguson, 2013). Further, our understanding of how mandated reporters view and differentiate PD from reportable forms of abusive parenting behaviors is also limited. The current perceptions, debates, and scientific evidence surrounding PD are polarized; PD is often regarded as invariably acceptable or unacceptable, which negates important nuances about its use, including the conditions (e.g. how PD was delivered) and contextual elements (e.g. cultural normativeness of PD) that may define or influence the acceptability of PD (Ferguson, 2013). These nuances must be parsed out in order to discern what renders PD unacceptable, and at what point PD behaviors are perceived to cross the line into abuse.

As the concept of PD and the boundary that differentiates PD from abuse remain poorly defined, child maltreatment allegations stemming from cultural differences in parenting values and PD use will likely persist. It is crucial to examine how minority parents, who may have very different parenting values compared to the majority group, differentiate PD from abuse to understand their perceptions and attitudes on acceptable and unacceptable forms of parenting practices. Importantly, it is imperative to compare these parents' PD and abuse differentiations with those of mandated reporters of child abuse, who apply a societal, clinical, and/or legal standard to normative parenting behaviors. The long-term goal of this study is to test Q-methodology as a model for enhancing our knowledge in the perceptions

surrounding PD and abuse differentiation in diverse cultural, social, and professional groups. Insights from such studies may also inform the design of parenting and child abuse training programs to help immigrant parents reported for suspected child maltreatment.

Chinese versus Western Parenting

Examining PD within a cultural context is essential as it affects parents' use of and their children's responses to PD (Douglas, 2006; Gershoff et al., 2010; Lansford et al., 2005; Lansford & Dodge, 2008; Lansford, Deater-Deckard, Dodge, Bates, & Pettit, 2004). Of note, differences between Chinese and Western parenting values and the normative use and endorsement of PD among Chinese parents (Hong & Hong, 1991; Jambunathan, Burts, & Pierce, 2000) may be an important impetus for child physical abuse allegations in Chinese American families.

Chinese parenting is rooted in values and practices distinct from Western societies (Stewart et al., 1998), with particular emphasis on collectivism, parental control, and emotional restraint (Chao, 1994). Although these values are often regarded as less favorable or "authoritarian" (Baumrind, 1971) in Western cultures, some evidence suggest they are positive values in the context of Chinese parenting. For example, parental control has been associated with negative child outcomes in Western families (Kakihara, Tilton-Weaver, Kerr, & Stattin, 2009; Van Der Bruggen, Stams, & Bogels, 2008; Vieno, Nation, Pastore, & Santinello, 2009). However, research suggests that parental control is associated with better child psychological adjustment (Huntsinger & Jose, 2009), higher school achievement (Dornbusch, Ritter, Leiderman, Roberts, & Fraleigh, 1987), and better parent-child relational

qualities (Shek, 2007) in Chinese families. Therefore, parental control and associated PD use may be considered positive and reasonable in the Chinese culture and, indeed, Asian American children are less likely to label PD as abusive despite higher PD use by parents (Lau et al., 2006).

Collectivism and emotional restraint are important Chinese cultural values that promote family harmony and cohesion. As a result, PD use likely stems from the necessity to promote child obedience and behavior regulation rather than an “angry physical response to child transgressions” (Lau, 2010). Therefore, the merit of Chinese parents’ PD use and endorsement should be viewed in light of their cultural traditions and the intentions under which PD is exercised, particularly when examining the use of PD and its social acceptability in Chinese American families who may be parenting in a culture that is different from their own.

Physical Discipline and Child Physical Abuse in Chinese American Families

The prevalence rates on PD use and child maltreatment reports among Chinese Americans remain unclear and vary widely by sources, primarily due to the under-representation of Chinese Americans in national surveys (Kim, Lau, & Chang, 2006; Straus & Stewart, 1999). However, it is evident that many Chinese Americans get involved with the child welfare system. For example, over a 6 month period in 2000, over 77% of all requests for interpretation and translation in Asian languages in the Division of Child Protection in New York City were made in Chinese (DHHS, 2001).

Evidence also supports that Chinese American parents reported for child maltreatment are more likely to be reported for physical abuse than other types of

abuse or neglect, and at rates greater than those for the general population (35.5% versus 18.9% in non-Asian groups; Rhee et al., 2008). Indeed, in a sample of 220 active Chinese child abuse case files in California, physical abuse was the primary child maltreatment allegation (Rhee & Chang, 2006). Importantly, 54.6% of suspected perpetrators had resided in the US for 10 years or less (Rhee & Chang, 2006), suggesting new immigrants may be more vulnerable to reports of child maltreatment.

Acculturation and Parenting in Chinese Immigrants

Chinese American parents are aware of the cultural differences in parenting as they purposefully negotiate their ethnic values and practices to accommodate those of their host culture (Duncan, 2008). With persistent contact and cultural immersion, Chinese immigrant parents undergo an acculturative process that gradually changes their parenting attitudes and practices to create a parenting style that is uniquely situated between those of their Chinese and European American counterparts (Chiu, 1987; Lin & Fu, 1990). Many studies have examined the impact of acculturation on Chinese immigrant parents' parenting practices and associated parent and child mental health outcomes. However, our knowledge in acculturation's effect on Chinese immigrant parenting, including perceptions and use of PD, remains inconclusive (Ho, 2014; *Manuscript 1*).

It has been suggested that studies examining the relationship between acculturation and parenting practices among Chinese American parents have produced mixed results (e.g. reports of positive, negative, or no associations) due to their exclusive use of linear acculturation measures, which limits our understanding

of how parenting norms shift as Chinese immigrant parents acculturate (Lau, 2010). Traditionally, acculturation has been conceptualized as a linear process where one simultaneously loses their ethnic characteristics while adopting the host characteristics, thus creating inversely related levels of ethnic and host orientation. However, recent acculturation-related studies are gaining in favor of the orthogonal model of acculturation, which posits that ethnic and host characteristics may vary along separate and unrelated continuums, hence creating two distinct levels of orientation (Berry, 1980). Studies examining PD among Chinese immigrants using the orthogonal model of acculturation is limited, and more studies using rigorous and multiple measures of acculturation are needed to understand how different patterns of socialization affect PD endorsement, use, and associated parent and child outcomes in Chinese American families.

The current study sought to understand PD and abuse differentiations among minority parents within the context of Chinese American culture, and to compare their differentiations with those of one group of mandated reporters of child abuse (i.e. pediatric nurses). The goal is to begin identifying potential cultural gaps in perceived acceptable and unacceptable parent behaviors that may be drivers for child maltreatment allegations for parents who are raising children in a society where their values may conflict with the norm.

METHOD

Data were collected and analyzed using Q-methodology. A Q-methodology study (or Q-study) is traditionally performed in two sequential phases. The first phase involves creating a clear and representative collection of stimulus items (e.g.

written statements) on the topic of study, known as a Q-sample (Akhtar-Danesh, Baumann, & Cordingley, 2008). In the second phase, participants complete a sorting exercise to rank and assign the Q-sample on a predefined continuum to express their viewpoint in a gestalt manner. The Q-sort continuum commonly utilizes a quasi-normal distribution to restrict the number of statements a participant can place under each rank along the continuum, thus encouraging the participant to make fine discriminations between all stimulus items (McKeown & Thomas, 2013).

To analyze Q-data, participants' sorts are subjected to by-person factor analysis, which yields groups of participants (i.e. factors) who performed similarly on their sorts (McKeown & Thomas, 2013). Then, composite Q-sorts are generated to elicit the general views of participants who think similarly. Findings from Q-studies allow us to uncover different existing viewpoints on a topic, identify how these viewpoints converge or diverge, and examine the characteristics of people who are likely to endorse them (Akhtar-Danesh et al., 2008).

Q-methodology was chosen for this study because it allows for a holistic and empirical examination of human subjectivities, perceptions, and attitudes. The sorting procedure used in Q-methodology avoids response-set biases (i.e. extreme or acquiescence response biases) common in Likert-type surveys of subjectivity because participants are forced to make fine discriminations between all stimulus items in order to complete the sort (McKeown & Thomas, 2013). Further, the use of a predefined Q-sort continuum standardizes the number of discriminations each participant has to make (Block, 1956), thus decreasing the risk for social desirability bias. Therefore, this methodology is particularly advantageous for examining

emotionally charged or value-laden topics, such as how individuals differentiate PD from abuse.

Subjects and Settings

Participants were sampled from two target populations. The first target population included mothers who self-identified as Chinese descent and had at least one biological child between the ages of 3 and 6 (i.e. preschool-age). This child age range was selected based on national data showing that PD use peaks for children in this age bracket (Straus & Stewart, 1999; Zolotor, Theodore, Runyan, Chang, & Laskey, 2011). Mothers of children with significant developmental disabilities or chronic illnesses that require more than one hospitalization in the past year (per parent report) were excluded. These mothers were initially recruited using fliers distributed at Chinese language schools, Chinese churches, and Asian grocery stores in Maryland. To promote variability in acculturation, quota sampling was used to recruit foreign-born (i.e. 1st generation) and US-born (i.e. $\geq 2^{\text{nd}}$ generation) Chinese American mothers.

To create the Q-sample, 6 foreign-born and 5 US-born Chinese American mothers who met eligibility criteria were interviewed by phone using semi-structured interviews. Recruitment for this phase of the study was complete when informational redundancy was reached (i.e. when participants no longer elicit new information; Sandelowski, 1995). In the sorting phase, an additional 20 foreign-born and 15 US-born Chinese American mothers who were eligible for the study met with the investigator in person at a location of their choice to complete the study.

The second target population included one group of mandated reporters of child abuse (i.e. pediatric nurses). Nurses were eligible if they have worked in the pediatric field for a minimum of 2 years, as evidence suggests a relationship between professional experience and reporters' suspicion and intention to report suspected cases of child maltreatment (Hansen, Bumby, Lundquist, Chandler, Le, & Futa, 1997). Nurses were recruited through convenience and snowball sampling. Flyers with the study website were posted in break rooms at inpatient and outpatient pediatric units at an urban academic medical center. Forty-eight nurses completed the study online. The data were collected using the internet application, FlashQ (Hackert & Braehler, 2007)

Procedures

Phase 1: Creating the Q-Sample.

The Q-sample was created inductively through semi-structure interviews conducted between December 2012 and February 2013. Eleven Chinese American mothers were asked to provide examples of physical punishments used on 3- to 6-year-old children that are (1) common in the Chinese American community, (2) considered mild to normal, (3) considered harsh, (4) difficult to tell if they are discipline or abuse, and (5) definitely considered abusive. The interviews were audio-recorded and conducted by the first author based on an interview guide. The interviews lasted between 20 to 60 minutes, and were completed in English (n=5), Mandarin Chinese (n=4), Cantonese Chinese (n=1), or a mix of Mandarin Chinese and English (n=1). The first author is fluent in all three languages.

The interviews were transcribed verbatim by a certified transcription and translated to English when necessary. Based on examples of physical punishments elicited from the interviews, a list of 71 statements, each describing a behavior or outcome of punishing a child between ages 3 and 6, was compiled. These statements broadly fell under 5 domains: (1) Intention, (2) Pattern of use, (3) Specific behaviors, (4) Delivery, and (5) Outcome. Some domains were further divided into subdomains. For a description of the domains and a sample of statements with their corresponding domain(s), see *Manuscript 3*. The final Q-sample was translated and back-translated between English and Chinese to assure translational equivalence when used in subsequent sorting.

A 13-point sorting continuum ranging from “Most Unacceptable, -6” to “Most Acceptable, +6” was used in the sorting phase (see Figure 5.2.1). These response anchors were chosen to provide a meaningful and continuous psychological continuum (i.e. ranging from “most” to “most”), and to avoid potential stigma associated with using value-laden terms (e.g. abuse). The statements and sorting procedures were pilot tested with child mental health and forensic nurse experts to ensure content and face validity of the statements (Akhtar-Danesh et al., 2008), and clarity of sorting instructions. For this study, statements that were placed under the same rank along the continuum are assumed to mean the same level of acceptability to the participant.

Phase 2: Sorting the Q-Sample

Chinese American mothers were asked complete the sort based on what they, as parents, think are acceptable or unacceptable when punishing a child

between 3 and 6 years old. Similarly, the pediatric nurses were asked to sort the statements based on what they, as mandated reporters of child abuse, think are acceptable and unacceptable when punishing a child between ages 3 and 6.

Consistent with standard Q-method procedures, the sort was completed in two steps. First, participants read through the statements and divided them into three piles – “Acceptable,” “Unacceptable,” and “Not sure.” Then, participants distributed the statements along the Q-sort continuum one pile at a time, with the “Not sure” pile being distributed last.

Chinese American mothers completed their sorts in person with each statement printed on a card, while pediatric nurses completed their sorts online using a drag-and-drop interface. The sorting procedures for both groups were identical, and previous studies have shown that online sorting is preferable and equivalent to paper-based sorting for participants who are computer-proficient (Reber, Kaufman, & Cropp, 2000).

After completing the sort, the Chinese American mothers filled out a demographic questionnaire and an acculturation measure in paper and pencil; the pediatric nurses were prompted to complete a demographic and nursing background questionnaire after the online sort. The average time to complete the study for pediatric nurses and Chinese American mothers was 49.25 ($SD=41.56$) and 42.60 ($SD=14.61$) minutes, respectively. This study was approved by the University institutional review board.

Survey Measures

Demographics. A demographic form was used to obtain information on Chinese American's mothers' age, marital status, generational status (i.e. foreign- or US-born), family origin (e.g. China, Taiwan, Hong Kong, etc.), years residing in the US, number of children and their respective ages, and the number of people currently living in their household.

A demographic and nursing background form was used to collect information on nurses' sex, age, race/ethnicity, whether they have any children, current job position (e.g. registered nurse, nurse practitioner, etc.), highest nursing degree obtained, years of pediatric nursing experience, and whether they have ever received child abuse training.

Acculturation. The *Suinn-Lew Asian Self-Identity Acculturation Scale* (SL-ASIA; Suinn, Rickard-Figueroa, Lew, & Vigil, 1987) was used to measure Chinese American mothers' linear and orthogonal levels of acculturation. The SL-ASIA is a 26-item scale that measures language use, identity, friendships, behaviors, cultural background, attitudes, values, and self-identity, which broadly cover both private and public domains of acculturation.

The first 21 items assess linear level of acculturation. The linear score ranges from 1 to 5, where a higher score indicates higher level of acculturation. The remaining items are used to assess orthogonal acculturation, which are divided into three acculturation domains: Values (items 22 and 23), Behavior (items 24 and 25), and Self-Identity (item 26). The Values and Behavior domains are scored based on a matrix which separates participants into 4 potential categories of orthogonal

acculturation: Asian, Western, Bicultural, or Alienated. The Self-Identity domain is scored based on response to the single item, which includes Asian self-identified, Western self-identified, and 3 Bicultural subcategories (i.e. “Bicultural, Asian self-identified,” “Bicultural, Western self-identified,” and “Bicultural, bicultural self-identified.”

This study used a well-validated, Chinese-translated version of the SL-ASIA. The reliability of SL-ASIA in Chinese Americans is high, with Cronbach’s alphas ranging from 0.87 to 0.90 (Ponterotto, Baluch, & Carielli, 1998). It was found to have strong and consistent convergent-related validity, and acceptable construct validity (Ponterotto et al., 1998), and is the most widely used acculturation measure in the Asian American population (Dao, Teten, & Nguyen, 2011; Ryder, Alden, & Paulhus, 2000).

Analytic Procedures

Q-sorts were collected from 83 participants (i.e. 20 foreign-born Chinese American mothers, 15 US-born Chinese American mothers, and 48 pediatric nurses). By-person factor analysis was conducted using PQMethod 2.33 (Schmolck, 2013). Centroid factor extraction was used to identify groups of participants with similar sorts. Because there is no single, objective way to identify the best factor solution in Q-studies (Watts & Stenner, 2012), different vantage points were used to assess the best solution to describe the different viewpoints (Cairns, 2013).

Initial assessments of iterations of 1-, 2-, and 3-factor solution suggested that participants’ views on PD and abuse differentiations were largely similar. Therefore, a variant analysis method using a 2-factor solution was employed to enhance

inclusion of participant views and to capture the fine nuances that distinguish different PD and abuse differentiations.

After initial extraction of two factors, defining sorts were identified to select sorts that correlated significantly with a factor. Traditionally, sorts that uniquely and statistically significantly load on a factor at $p < 0.01$ based on the equation: $\pm 2.58(1/\sqrt{n})$, where n = the number of statements (Brown, 1980), were considered defining for that factor. Hence, sorts with factor loadings greater than ± 0.306 (i.e. $\pm 2.58(1/\sqrt{71})$) were considered significant and representative of that factor in this study.

Of the 83 sorts, 82 loaded significantly on Factor 1, of which 14 also loaded significantly on Factor 2. These “confounding sorts” (i.e. those that loaded significantly on more than one factor) are usually excluded in Q-studies because they diminish the distinctiveness between the viewpoints expressed in the factors that they load on. However, the purpose of this study was to identify the nuances in different PD and abuse differentiations and, therefore, the confounding sorts were included and interpreted as variations of the general viewpoint (i.e. Factor 1). As a result, the 7 sorts that loaded significantly positively on Factor 2 and the 7 sorts that loaded significantly negatively on Factor 2 were forced into unique factors to represent the 2 variant viewpoints, and a total of 3 factors (1 pure factor and 2 variant factors), explaining 66% of the total variance, were used in the final analysis.

The defining sorts for each factor were weighted based on their factor loading to create a composite Q-sort, which represents the generic viewpoint of the factor in the original configuration of the Q-sort continuum. Composite Q-sorts were

interpreted using the *crib sheet* method described by Watts and Stenner (2012) to identify statements that were ranked most acceptable and most unacceptable in each factor, and statements that were ranked more or less acceptable within a factor in comparison to all other factors. This method provided a systematic approach to examine the relevance of individual statements in the context of the entire viewpoint, identify and compare how statements were ranked across different composite Q-sorts, and deliver a holistic interpretation of different viewpoints. Further, statement domains were used to guide and explore fundamental differences in PD and abuse differentiation between viewpoints.

Participant characteristics were analyzed using Stata®12 (StataCorp, 2011). Descriptive statistics were used to summarize demographics, acculturation, and nursing background data, as well as sorting characteristics (i.e. time to complete study and distribution of statements in the initial 3-pile sort) for the full sample and participants defining each factor. Mann-Whitney U and Fisher's Exact tests were used to assess acculturation differences between foreign- and US-born mothers. These data were analyzed last to preclude investigators from extracting factors and interpreting the viewpoints based on assumptions and preconceptions of participant characteristics (Watts & Stenner, 2012). Finally, a narrative was generated for each factor to provide a description of the viewpoint and the characteristics of participants who defined them.

RESULTS

The demographic, professional, and sorting characteristics of the 48 pediatric nurses are listed in Table 5.3.1. Overall, the nurse sample was comprised of

experienced pediatric nurses who were white/Caucasian females born in the US. On average, these nurses' initial 3-pile sorts were similarly to those of Chinese American mothers. Both groups placed most of the statements in the "Unacceptable" pile and had the least statements placed in the "Not Sure" pile.

Table 5.3.2 describes the demographic, acculturation, and sorting characteristics of Chinese American mothers. All of these mothers were married; most of them had 2 children and reported China as the place of their family's origin. In general, these mothers were slightly more Asian-identified than bicultural based on linear measure of acculturation. However, they were mostly bicultural, especially in the behavioral domain, when their acculturation levels were measured orthogonally. Mothers who were foreign-born had resided in the US between 2 and 33 years.

Foreign- and US-born Chinese American mothers had significantly different levels of acculturation, supporting acculturation variability was achieved through quota sampling. The mean linear acculturation score of US-born mothers ($M=3.40$, $SD=0.34$) was higher than foreign-born mothers ($M=2.19$, $SD=0.34$; $U(33)=898.36$, $z=-4.92$, $p<0.001$), meaning US-born mothers were more acculturated. In terms of orthogonal acculturation, foreign- and US-born mothers differed in the Behavior (*Fisher's exact*, $p=0.005$) and Self-identity (*Fisher's exact*, $p<0.001$) acculturation domains. A higher proportion of foreign-born mothers were Bicultural-identified (80% vs. 53.33%) and a higher proportion of US-born mothers were Western-identified (40% vs. 0%) in the Behavior domain. For the Self-identity domain, a higher proportion of foreign-born mothers were Asian-identified (60% vs. 0%),

whereas a higher proportion of US-born mothers were Western-identified (80% vs. 15%). No differences were found in the Values domain (*Fisher's exact, p=0.39*).

Three viewpoints on differentiating physical discipline (PD) and abuse were uncovered in this study. Sixty-eight sorts defined a “pure” Factor 1, which represents a general view of PD and abuse differentiations among Chinese American mothers and pediatric nurses. This factor was labeled as “General Viewpoint”. In addition, 2 variant factors, each consisting of 7 defining sorts, represent 2 variations of the general view. These factors are labeled as “Variant Viewpoint 1” and “Variant Viewpoint 2.”

Factor Consensus

The correlations between the general viewpoint and the variant viewpoints were high ($r=0.92$ with Variant Viewpoint 1; $r=0.80$ with Variant Viewpoint 2), meaning the viewpoints overlapped in many ways. However, the correlation between the two variant viewpoints is markedly lower ($r=0.57$), indicating the variant viewpoints represent distinctly different variations of the general view.

There was wide consensus across the 3 viewpoints on what was considered “Most Unacceptable” and “Most Acceptable” behaviors or outcomes related to punishing a child between 3 and 6 years old. Of the 71 statements used in the Q-sort, 8 statements were ranked “-4” or lower and 11 statements were ranked “+4” or higher across all factors, which denote statements that were ranked highly unacceptable or highly acceptable across all viewpoints. These statements and their respective domains are listed in Table 5.3.3.

Most statements that were ranked highly unacceptable were related to punishments that result in severe physical injury (i.e. bone fractures, burns, swelling/welts, bruises, and leaving scars). Repetitive and frequent use of injury-inducing punishments (i.e. leaving more than 5 marks on the body or marks in different stages of healing) were also highly unacceptable. Of the different “tools” used for hitting the child included in the Q-sample, the use of a fist was the only mode of hitting a child that was considered highly unacceptable across all factors.

The statements that were ranked highly acceptable across all factors did not involve physical contact between the parent and the child. The use of alternative parent behaviors (e.g. withdraw privilege, withdraw attention, and impose consequences) for punishing a child, especially in short durations, were considered most acceptable. Lastly, punishing the child with positive parent intent (i.e. to teach the child a lesson or to change the child’s behavior) was also considered most acceptable.

Factor Interpretation

The following factor narratives were generated to highlight the nuances in PD and abuse differentiation within and across the 3 viewpoints. Each factor narrative will begin with a description of participants who defined that view. Then, a summary of the viewpoint will be presented to provide a holistic understanding of that view. Statements that are central to describing each factor are embedded in its narrative. The rankings of these statements within the factor composite Q-sort are denoted in brackets (e.g. [+3] indicates a statement was ranked “+3” along the 13-point continuum ranging from “Most Unacceptable, -6” to “Most Acceptable, +6”).

The ranking and distribution of statement domains will also be described.

Table 5.3.4 lists select statements that were ranked differently across viewpoints by statement domain.

General Viewpoint: PD Differs from Abuse by its Potential for Injury

This viewpoint was defined by a majority of the participants (82.93%), including 38 pediatric nurses, and 17 foreign-born and 13 US-born Chinese American mothers. The mean ages of participants in this group were higher than their counterparts who endorsed the variant views. The pediatric nurses who defined this viewpoint had, on average, worked more years in pediatric nursing and reported a higher frequency of having ever received child abuse training (57.89%) compared to nurses in other groups (20% and 50%). There was a comparable number of foreign-born and US-born Chinese American mothers defining this view.

Those endorsing this view were aware of the common signs of child physical abuse, i.e. shaking the child vigorously [-5] or causing the child to have marks in different stages of healing [-6]. However, they did not consider the use of physical force invariably unacceptable. In other words, there were some discipline behaviors that were perceived as worse than hitting a child. For example, mild spanking (i.e. hitting the child on the palms or buttocks with an open hand) was preferable to using punishments that were long in duration (e.g. isolating the child or withdrawing attention from the child for 2 hours). However, punishments used in short durations, and along with other non-physical strategies, such as judicious use of food as punishment (e.g. not allowing the child to have a snack) and imposing reasonable consequences (e.g. making the child do household chores), are generally

more acceptable than spanking. For this group, privilege withdrawal is the optimal form of discipline.

The differentiation between PD and abuse is based on the punishment's potential to cause physical injury and the manner in which it is exercised. Although mild spanking is a permissible discipline strategy, it becomes unacceptable if it physically hurts the child or leaves a mark. Their mode of delivery also served as a proxy for injury potential and was central to the acceptability of their use. For example, hitting the child on the head and torso was more unacceptable than hitting extremities. In addition, hitting a child with any object was generally unacceptable, but hitting a child with an object that is less likely to cause injury [-1] was less unacceptable.

Finally, this group was indifferent towards the frequency of punishment, although they generally agreed that punishments should be used sparingly. There was also less concern about the parents' intent for punishing the child, and concrete discipline behaviors or outcomes are used to anchor and distinguish between most acceptable and most unacceptable discipline behaviors.

Variant Viewpoint 1: PD Differs from Abuse by its Potential to Inflict Pain

This viewpoint was defined by 7 participants, including 5 pediatric nurses and 2 US-born Chinese American mothers. This factor was highly correlated to the general viewpoint, meaning there were many similarities in PD and abuse differentiation between those endorsing the general and this variant view. Only one nurse in this group reported having ever received child abuse training. The Chinese American mothers in this group had the highest linear level of acculturation (i.e.

most acculturated), and generally considered themselves as Bicultural and were more Western-identified.

In this view, the differentiation between PD and abuse was dependent upon the potential to inflict pain. Unlike the general viewpoint, the use of physical force, especially those that involved the act of hitting, was invariably unacceptable. In addition, using a designated object to hit the child [-3] was more unacceptable than hitting the child with any object available at the time [-2], indicating a disapproval for premeditated intent to hit the child or the use of physical punishment as a regular discipline strategy.

Despite a difference in the approval of mild spanking, this variant view is comparable to the general view in many regards. For example, those defining this view were unconcerned with the frequency of punishment, and considered prolonged isolation and imposed consequences inferior to punishments that were used in short duration or involved attention or privilege withdrawal. However, the acceptability of punishment based on parent's intention is noteworthy. Those defining this view were generally indifferent towards punishments exercised under negative parent intention, but positive parent intentions (e.g. punishing the child to teach the child a lesson [+6]) were important anchors that define when and how physical discipline is most acceptable. For this group, punishments were most acceptable when they stemmed from positive parenting intentions and did not inflict pain.

Variant Viewpoint 2: PD Differs from Abuse by its Potential to Incite Fear and Uncertainty

This viewpoint was defined by 7 participants, including 4 pediatric nurses and 3 foreign-born Chinese American mothers. This viewpoint diverged distinctly from the variant viewpoint described above and from the general viewpoint. The participants who endorsed this view were relatively younger, and the pediatric nurses defining this view had worked fewer years in pediatric nursing as compared to those defining other viewpoints. Half of the nurses in this group reported having ever received child abuse training and most of them did not have children. A majority of the participants in this group were born outside of the US, including the only pediatric nurse in the sample that was foreign-born and self-identified as Asian/Pacific Islander. The Chinese American mothers in this group had the lowest linear acculturation score, meaning they were more Asian-identified. Two of the three mothers were also Asian-identified in orthogonal measures of values and self-identity.

For those defining this view, punishments that incite fear and uncertainty were more detrimental and unacceptable compared to punishments that inflict pain or minor injuries. For example, isolation or imposed consequences in long durations were highly unacceptable (e.g. putting the child in a dark basement for 2 hours [-5]), and even more so than causing the child to bleed [-3], shaking the child vigorously [-1], or hitting the child on any part of the body, including the head and torso. Withdrawing attention in long durations was also less favorable than hitting the child. These participants also supported the use of physical force to punish children

when first line strategies (i.e. ignoring or time-out in short durations) fail. Mild spanking was considered highly acceptable, and other physical punishments that inflict pain, but not injury, were also acceptable. For example, pinching the child [+2] and pulling on the child's ear [+3] were more acceptable than isolating the child, even in short durations. Since the use of physical force was acceptable, minor signs of injury, such leaving a mark or red mark(s), were ranked more acceptable for this group.

Three statement domain patterns were notably different. First, the use of food as a punishment was generally unacceptable. Not allowing the child to have a snack [+2], although acceptable, was considered less so compared to the other 2 viewpoints. Second, it is unacceptable to punish the child frequently (e.g. punishing the child daily [-3]). Third, withdrawing privileges were acceptable, but not the most optimal discipline strategy. For this group, the most acceptable (i.e. "+6") punishments involve imposing a consequence or withdrawing attention in short durations.

Those defining this view agreed that it is highly unacceptable to execute punishments under negative parent intention or in an uncontrolled manner. For example, punishing the child to release the parents' anger and frustration [-6] anchored the definition for most unacceptable parent discipline behavior. Hitting the child with the same designated object every time [+3] and using objects that were less likely to cause injury [+3] were acceptable, perhaps because they represented physical punishments that are delivered in a controlled manner.

Conversely, hitting the child with any object available at the time [0] was less acceptable, possibly because it may indicate the parent's anger or loss of control.

DISCUSSION

This study uncovered 3 viewpoints on physical discipline (PD) and abuse differentiation among pediatric nurses and Chinese American mothers with varying levels of acculturation. These viewpoints were uncovered organically using statistical methods to empirically analyze participants' Q-sorts, without presuppositions or assumptions about the characteristics of participants who may endorse each view. The viewpoints expressed represent "functional categories," i.e. the natural groupings of people who share similar views, rather than "logical categories" that are normally imposed on participants based on certain characteristics (Brown, 1993).

Although there was wide consensus on most acceptable and most unacceptable forms of parent discipline behaviors across the 3 views, findings from this study generated new insight on the nuances in PD and abuse differentiations based on definable domains of parent discipline behaviors. The contextual factors surrounding how PD is exercised and whether these factors influence the acceptability and clinical outcomes of PD use remain largely unexamined (Ferguson, 2013). Our findings suggest the acceptability of PD is based on a combination of punishment-related domains, including the punishment itself (i.e. specific behavior), how it is executed (i.e. delivery and pattern of use), the conditions under which it is exercised (i.e. parent's intention), and its outcome (i.e. injury and severity). To our knowledge, this is the first study that incorporated these relevant domains

associated with PD to generate holistic perspectives on PD and abuse differentiation. The differences between the 3 viewpoints further highlight their nuances, and we found varied opinions on how, when, and if PD is regarded as an acceptable parent discipline strategy. For example, some of the variation we identified was based on parent's intent behind punishing a child, the use of physical force, the frequency and delivery of punishment, and the use of specific discipline strategies (e.g. the use of food). Further, the 3 viewpoints broadly differentiated PD from abuse by the punishment's potential to inflict injury, pain, or incite fear and uncertainty.

Most research on PD conflates mild, nonabusive, and customary spanking with harsh and severe forms of punishments to draw conclusions about PD (Larzelere & Kuhn, 2005). This approach grossly generalizes PD and potentially inflates effect sizes of PD and negative child outcomes (Ferguson, 2013). It also negates PD use as a complex set of behaviors that are influenced by the interactions between personal, environmental, and social circumstances. PD use must be measured in its total, with consideration of how it is exercised and the conditions under which it is exercised, in order to draw valid conclusions about its effects on child outcomes. The findings from this study highlighted 5 definable domains (i.e. specific behavior, delivery, outcome, intention, and pattern of use) that may be relevant to measuring PD use.

Q-methodology was chosen for this study because it allowed for a complete, gestalt understanding of different viewpoints of PD and abuse differentiation. Also, the Q-sorting procedure "forced" participants to make fine discriminations between

all statements related to PD, which bypassed response-set and social desirability biases common in PD research using other survey methods. However, the objective of Q-methodology is to elicit and describe prevailing viewpoints on a phenomenon, not the proportion of individuals endorsing each specific viewpoint (Cross, 2005). Therefore, the person sample size requirements are inherently small (Brown, 1980) and preclude drawing inferences about proportions of people who are likely to endorse each view. Nonetheless, we found some interesting results by descriptively comparing the characteristics of participants who defined different viewpoints.

For example, participants endorsing the General Viewpoint were older, and some studies have shown older parents are more likely to be in favor of spanking (e.g. Gagne, Tourigny, Joly, & Pouliot-Lapointe, 2007). Further, the variant views were endorsed by Chinese American mothers with distinctly different levels of acculturation, supporting the notion that acculturation may play an important role in PD perception and use among immigrant parents. For example, mothers who viewed physical punishments (e.g. hitting) invariably unacceptable were more acculturated than those who favored the use of physical punishments. Lastly, pediatric nurses' professional experience and child abuse training status may also influence their PD and abuse differentiations (e.g. nurses defining the variant viewpoints were less likely to report having ever received child abuse training than those defining the general view). However, these comparisons are descriptive and larger studies examining the proportions of people endorsing these views are needed to infer characteristics of people who fall into these "functional categories".

We set out to understand and compare PD and abuse differentiations among Chinese American mothers and one group of mandated reporters (i.e. pediatric nurses) to address the cultural gap in perceived acceptable and unacceptable parent behaviors that may be drivers for child maltreatment allegations. However, we found that pediatric nurses were represented across all viewpoints, suggesting there is substantive diversity in PD and abuse differentiation among mandated reporters. While the fine line between PD and abuse is subjective and nuanced, the law currently used to protect children is not equipped to exercise effectively under nuanced circumstances. Findings from this study underscore the need to improve child abuse training for mandated reporters working with immigrant groups. Understanding how immigrant parents differentiate PD from abuse can also inform the development of parent education programs that address the nuances of what can make PD a reportable act in the US.

Two limitations were identified in this study. First, the use of convenience and snowball sampling may limit the variety of viewpoints uncovered because participants were recruited from homogenous populations. Second, the Q-sample was generated based on parent discipline behaviors that are familiar to the Chinese American community, and may not adequately or meaningfully represent the full range of PD behaviors or outcomes. For example, the word “hitting” was used consistently in the Q-sample because unlike the English language, which has many different words to describe the act of hitting a child (e.g. spanking, striking, swatting, etc.), there is only one standard word in the Chinese language to describe this behavior. However, findings from this study support the use of Q-methodology as a

meaningful approach to examine PD and abuse differentiation. Future studies using different populations (i.e. other cultural, social, or professional groups) may help elicit more diverse views and enhance our understanding of PD and abuse differentiation.

CONCLUSIONS

The perception and use of PD is culture-based, and the differentiation between PD and abuse is subjective and complex. Three viewpoints on PD and abuse differentiation based on acceptability of different discipline behaviors or outcomes were uncovered among pediatric nurses and Chinese American mothers with varying levels of acculturation. Although there was wide consensus on most acceptable and most unacceptable parent discipline behaviors, the nuances that differentiate PD from abuse differed across these groups. Overall, PD and abuse differentiations varied based on the punishments' potential to inflict injury, pain, or incite fear and uncertainty. To enhance our understanding of PD and its differentiation from abuse requires further exploration to uncover viewpoints from diverse cultural, social, and professional groups.

Table 5.3.1 Characteristics of Pediatric Nurses in Full Sample and by Viewpoint

	Full Sample (n=48)	General Viewpoint (n=38)	Variant Viewpoint 1 (n=5)	Variant Viewpoint 2 (n=4)
<i>Demographic characteristics</i>				
Mean age in years (SD)	32.75 (8.57)	33.79 (9.26)	29.20 (2.77)	27.50 (3.11)
Females, n(%)	45 (93.75)	37 (97.37)	5 (100.00)	3 (75.00)
Race, n(%)				
Black/African American	6 (12.50)	3 (7.89)	2 (40.00)	1 (25.00)
Caucasian/White	37 (77.08)	31 (81.58)	3 (60.00)	2 (50.00)
Asian/Pacific Islander	5 (10.42)	4 (10.53)	0 (0.00)	1 (25.00)
Hispanic, n(%)	3 (6.25)	2 (5.26)	0 (0.00)	0 (0.00)
Born in the US, n(%)	47 (97.92)	38 (100.00)	5 (100.00)	3 (75.00)
Have children, n(%)	21 (43.75)	17 (44.74)	3 (60.00)	1 (25.00)
<i>Nursing background</i>				
Mean years working in pediatrics (SD)	8.19 (6.89)	9.00 (7.47)	6.20 (2.59)	3.50 (1.00)
Current job position, n(%)				
Pediatric nurse	45 (93.75)	36 (94.74)	5 (100.00)	4 (100.00)
Pediatric nurse practitioner	2 (4.17)	1 (2.63)	0 (0.00)	0 (0.00)
Peds Nurse Informatics Coordinator	1 (2.08)	1 (2.63)	0 (0.00)	0 (0.00)
Highest nursing degree obtained, n(%)				
Associates Degree in Nursing	4 (8.33)	4 (10.53)	0 (0.00)	0 (0.00)
Bachelor of Science in Nursing	39 (81.25)	30 (78.95)	5 (100.00)	4 (100.00)
Master of Science in Nursing	5 (10.42)	4 (10.53)	0 (0.00)	0 (0.00)
Ever received child abuse training, n(%)	26 (54.17)	22 (57.89)	1 (20.00)	2 (50.00)

Table 5.3.1 (cont'd) Characteristics of Pediatric Nurses in Full Sample and by Viewpoint

<i>Sorting characteristics</i>				
Mean number of statements in the initial 3-pile sort (SD)				
"Acceptable" statements	16.81 (6.21)	15.84 (5.58)	15.80 (4.82)	25.50 (7.59)
"Not sure" statements	8.87 (6.64)	7.37 (5.80)	14.20 (9.68)	13.75 (1.71)
"Unacceptable" statements	45.31 (9.30)	47.79 (7.91)	41.00 (6.89)	31.75 (7.27)

Table 5.3.2 Characteristics of Chinese American Mothers in Full Sample and by Viewpoint

	Full Sample (n=35)	General Viewpoint (n=30)	Variant Viewpoint 1 (n=2)	Variant Viewpoint 2 (n=3)
<i>Demographic characteristics</i>				
Mean age in years (SD)	38.00 (4.28)	38.40 (4.43)	36.00 (2.83)	35.33 (2.52)
Generational status, n(%)				
1 st Generation (Foreign-born)	20 (57.14)	17 (56.67)	0 (0.00)	3 (100.00)
≥2 nd Generation (US-born)	15 (42.86)	13 (43.33)	2 (100.00)	0 (0.00)
Mean number of years residing in the US* (Range)	12.45 (2-33)	12.41 (3-27)	N/A	12.67 (2-33)
Country of family origin, n(%)				
China	25 (71.43)	23 (76.67)	0 (0.00)	2 (66.67)
Taiwan	3 (8.57)	2 (6.67)	1 (50.00)	0 (0.00)
Hong Kong	5 (14.29)	4 (13.33)	0 (0.00)	1 (33.33)
Family originated from different countries	2 (5.71)	1 (3.33)	1 (50.00)	0 (0.00)
Mean number of children (Range)	1.97 (1-3)	1.97 (1-3)	2.00 (2-2)	2.00 (2-2)
Mean age of all children in household (SD)	4.51 (1.49)	4.66 (1.52)	3.50 (0.71)	3.67 (1.26)
Mean number of people in household (Range)	4.20 (3-6)	4.17 (3-6)	4.00 (4-4)	4.67 (4-6)
<i>Acculturation</i>				
Mean linear acculturation score (SD)	2.71 (0.69)	2.69 (0.68)	3.67 (0.47)	2.27 (0.47)
Orthogonal acculturation for Values, n(%)				
Asian	16 (45.71)	14 (46.67)	0 (0.00)	2 (66.67)
Western	4 (11.43)	3 (10.00)	0 (0.00)	1 (33.33)
Bicultural	15 (42.86)	13 (43.33)	2 (100.00)	0 (0.00)
Orthogonal acculturation for Behavior, n(%)				
Asian	5 (14.29)	4 (13.33)	0 (0.00)	1 (33.33)
Western	6 (17.14)	6 (20.00)	0 (0.00)	0 (0.00)
Bicultural	24 (68.57)	20 (66.67)	2 (100.00)	2 (66.67)

* Foreign-born Chinese American mothers only

Table 5.3.2 (cont'd) Characteristics of Chinese American Mothers in Full Sample and by Viewpoint

Orthogonal acculturation for Self-Identity, n(%)				
Asian self-identified	12 (34.29)	10 (33.33)	0 (0.00)	2 (66.67)
Western self-identified	3 (8.57)	3 (10.00)	0 (0.00)	0 (0.00)
Bicultural, Asian self-identified	3 (8.57)	3 (10.00)	0 (0.00)	0 (0.00)
Bicultural, Western self-identified	2 (5.71)	1 (3.33)	1 (50.00)	0 (0.00)
Bicultural, Bicultural self-identified	15 (42.86)	13 (43.33)	1 (50.00)	1 (33.33)
<i>Sorting characteristics</i>				
Mean number of statements in the initial 3-pile sort (SD)				
"Acceptable" statements	15.80 (9.02)	14.23 (5.50)	31.00 (32.53)	21.33 (10.07)
"Not sure" statements	5.34 (4.68)	5.90 (4.75)	2.00 (1.41)	2.00 (3.46)
"Unacceptable" statements	49.86 (10.23)	50.87 (8.03)	38.00 (33.94)	47.67 (10.26)

* Foreign-born Chinese American mothers only

Table 5.3.3 Statements Ranked “Highly Unacceptable” and “Highly Acceptable” across All Viewpoints

Statement	Domain (Sub-Domain)
<i>“Highly Unacceptable” Statements*</i>	
Causing the child to have bone fracture(s)	Outcome (Injury)***
Causing the child to have burn(s)	Outcome (Injury)
Causing the child to have swelling/welts	Outcome (Injury)
Causing the child to have scar(s)	Outcome (Injury)
Causing the child to have bruise(s)	Outcome (Injury)
Causing the child to have more than 5 marks on the body	Outcome (Severity)
Hitting the child with a fist	Behavior (Physical Punishment) Delivery (Tools)
Causing the child to have marks in different stages of healing	Pattern of Use (Frequency) Outcome (Severity)
<i>“Highly Acceptable” Statements**</i>	
Not allowing the child watch television	Behavior (Withdraw Privilege)
Taking away the child's favorite item/ toy	Behavior (Withdraw Privilege)
Not allowing the child to play with friends	Behavior (Withdraw Privilege)
Putting the child in a time-out chair for 5 minutes	Behavior (Withdraw Attention) Pattern of Use (Short Duration)
Ignoring the child for 5 minutes	Behavior (Withdraw Attention) Pattern of Use (Short Duration)
Making the child do household chores	Behavior (Imposed Consequence)
Making the child do more homework	Behavior (Imposed Consequence)
Making the child stand facing a wall for 5 minutes	Behavior (Imposed Consequence) Pattern of Use (Short Duration)
Making the child exercise for 5 minutes	Behavior (Imposed Consequence) Pattern of Use (Short Duration)
Punishing the child to teach the child a lesson	Intention (Positive)
Punishing the child to change the child's behavior	Intention (Positive)

Note: Rankings range from “Most Unacceptable, -6” to “Most Acceptable, +6”

* Ranked “-4” or lower across all viewpoints

** Ranked “+4” or higher across all viewpoints

*** Outcome-related statements also fall under the domain of Specific Behavior (Physical Punishments)

Table 5.3.4 Select Statements Ranked Differently Across Viewpoints by Statement Domain

Domain (Sub-Domain)	Statement	Statement Ranking		
		General Viewpoint (n=68)	Variant Viewpoint 1 (n=7)	Variant Viewpoint 2 (n=7)
Intention (Positive)	Punishing the child to teach the child a lesson	+5	+6	+5
Intention (Negative)	Punishing the child to make the parent feel better	-1	0	-2
	Punishing the child to release the parent's anger and frustration	-2	0	-6
Intention (Equivocal)	Punishing the child to control the child	+3	+2	0
Pattern of Use (Frequency)	Punishing the child daily	+2	+3	-3
	Punishing the child weekly	+3	+3	-1
	Punishing the child month	+3	+4	+2
	Punishing the child a few times a year	+4	+5	+3
Behavior (Withdraw Privilege)	Not allowing the child to play with friends	+5	+4	+5
	Taking away the child's favorite item/toy	+6	+6	+4
	Not allowing the child to watch television	+6	+6	+5
Behavior (Use of Food)	Not allowing the child to have a snack	+4	+4	+2
	Putting hot sauce in the child's mouth	0	-1	-3
	Not allowing the child to have a meal	0	+1	-3
	Not allowing the child to have food or drinks for a day	-3	-1	-4
Behavior (Physical Punishment)	Shaking the child vigorously	-5	-4	-1
<i>The following statements also fall under Pattern of Use (Duration)</i>				
Behavior (Imposed Consequence)	Making the child stand facing a wall for 5 minutes	+5	+5	+6
	Making the child stand facing a wall for 2 hours	-1	0	-3
	Making the child kneel for 2 hours	-2	0	-4
Behavior (Withdraw Attention)	Ignoring the child for 5 minutes	+5	+4	+6
	Putting the child in a time-out chair for 5 minutes	+6	+5	+6
	Ignoring the child for 2 hours	+1	+1	-2
	Putting the child in a time-out chair for 2 hours	0	+2	-1

Note: Rankings range from "Most Unacceptable, -6" to "Most Acceptable, +6"

Table 5.3.4 (cont'd) Select Statements Ranked Differently Across Viewpoints by Statement Domain

Behavior (Isolation)	Locking the child in a room for 5 minutes	+4	+3	+2
	Making the child stand outside the house for 5 minutes	+2	+3	+1
	Putting the child in a dark basement for 5 minutes	+1	+2	-1
	Locking the child in a room for 2 hours	-1	0	-3
	Making the child stand outside the house for 2 hours	-1	-1	-5
	Putting the child in a dark basement for 2 hours	-3	-1	-5
<i>The following statements also fall under Behavior (Physical Punishment)</i>				
Outcome (Injury)	Causing the child to have red mark(s)	-3	-3	-1
	Causing the child to bleed	-6	-6	-3
Outcome (Severity)	Causing the child to have a single mark on the body	-2	-2	+1
	Causing the child to have marks in different stages of healing*	-6	-4	-4
Delivery (Tools)	Hitting the child with an open hand	+1	-3	+4
	Hitting the child with the same designated object every time	-2	-3	+3
	Hitting the child with any object available at the time	-3	-2	0
	Hitting the child with objects that are less likely to cause injury	-1	-2	+3
Delivery (Anatomical Location)	Hitting the child on the palms	+2	-1	+4
	Hitting the child on the buttocks	+3	-2	+5
	Hitting the child on the arms	0	-2	+3
	Hitting the child on the thighs	-1	-3	+2
	Hitting the child on the stomach	-4	-4	0
	Hitting the child on the chest	-3	-5	0
	Hitting the child on the head	-5	-5	0

Note: Rankings range from “Most Unacceptable, -6” to “Most Acceptable, +6”

* This statement also falls under Pattern of Use (Frequency)

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CHAPTER SIX: DISCUSSION

INTRODUCTION

Perceptions and use of physical discipline (PD) are culture-based (Douglas, 2006). Although healthcare professionals and professional organizations have set a normative standard against PD use, it is evident PD use among parents with young children remains prevalent (Straus & Stewart, 1999; Taylor, Lee, Guterman, & Rice, 2010; Zolotor, Theodore, Runyan, Chang, & Laskey, 2011). Further, how parents and mandated reporters distinguish between PD and child physical abuse (CPA) remains unclear. The nuances between acceptable and unacceptable parent discipline behaviors may be an important driver for child maltreatment allegations among parents who are raising children in a culture that is different from their own.

The purpose of this descriptive cross-sectional study was to understand how mothers in one ethnic minority group (i.e. Chinese American mothers) differentiate PD from CPA, and how acculturation may influence their perceptions of PD and CPA. Further, these mothers' PD and CPA differentiations were compared with those of a professional group of mandated reporters of child abuse (i.e. pediatric nurses) who are presumed to apply a societal standard to normative parenting in the US. This study was designed to address three specific aims and one exploratory aim:

- Specific Aim 1: Using Q-methodology, examine how Chinese American mothers differentiate PD from CPA.
- Specific Aim 2: Using Q-methodology, examine how pediatric nurses differentiate PD from CPA.

- Specific Aim 3: Describe how Chinese American mothers' differentiation between PD and CPA differ from those of pediatric nurses.
- Exploratory Aim 1: Describe how acculturation influences Chinese American mothers' perceptions of PD and CPA.

Specific Aim 1 and Exploratory Aim 1 were addressed in Part I of Chapter 5. Results for Specific Aims 2 and 3 were presented in *Manuscript 3* and *Manuscript 4*, respectively. This chapter synthesizes the results of this dissertation research, with a particular focus on findings that were not presented in previous chapters. The strengths and limitations of this study, the implications of the findings for nursing research and practice, and recommendations for future research will also be discussed.

SUMMARY OF FINDINGS

Specific Aim 1: Examine how Chinese American mothers different PD from CPA

This analysis included 20 foreign-born and 15 US-born Chinese American mothers, and uncovered three distinct views on PD and CPA differentiation. There was wide consensus on most unacceptable parent discipline behaviors, all of which represented punishments that result in serious physical injuries and denote frequent and repetitive use of physical punishments (e.g. causing the child to have multiple marks or marks in different stages of healing). Hitting the child on the head was also highly unacceptable. Conversely, withdrawing privileges, and imposing consequences and withdrawing attention in short durations were most acceptable.

Factor 1 comprised of a mix of foreign-born and US-born mothers, and these mothers were relatively younger than those endorsing the other views. This group of mothers endorsed the use of physical force to discipline children over isolating the child or imposing consequences for long durations. The intentions under which discipline is exercised is also important (i.e. negative intention is unacceptable and positive intention is acceptable), but do not anchor the definitions for most acceptable and unacceptable punishments. These mothers were generally indifferent towards the frequency of punishment.

Three foreign-born Chinese American mothers defined Factor 2, CPA was defined as punishments that result in any physical signs of injury, including leaving a red mark. Hitting the child on the buttocks was the only physical punishment that was perceived as acceptable. These mothers were indifferent towards the intention or frequency of punishments. The use of food as ways to control the child's diet (e.g. not allowing the child to have a snack or meal; force-feeding the child the rest of his/her meal) were considered highly acceptable.

The third factor was endorsed by 6 US-born mothers. This group considered hitting the child invariably unacceptable, regardless of delivery (i.e. anatomical location on which physical punishment was exercised or tools used) or outcome (i.e. injury or severity). On the other hand, these mothers perceived frequent punishment as highly acceptable, and punishing the child under positive intention (e.g. punishing the child to teach the child a lesson) anchors the definition of discipline practices that are most acceptable.

Specific Aim 2: Examine how pediatric nurses differentiate PD from CPA

Two distinct viewpoints on PD and CPA differentiation among 48 pediatric nurses were uncovered. Nurses defining both viewpoints generally agreed that physical punishments that result in serious injuries are most unacceptable, while punishments that have least potential to inflict physical harm (e.g. withdrawing privilege or attention and imposing consequences in short durations) are considered most acceptable parent discipline behaviors. Despite these agreements, the two viewpoints on PD and CPA differentiation varied by endorsement of using physical force versus using punishments that have potential to incite fear and uncertainty. These findings were discussed in *Manuscript 3*.

Nurses in Factor 1 strongly disapproved of using any physical force to punish a child. Hitting a child, regardless of how it is delivered (e.g. the tools used or the anatomical location on which the child is hit) was invariably unacceptable. To these nurses, even mild and common use of spanking, such as hitting the child with an open hand, was considered unacceptable. However, using punishments frequently and punishing the child with positive parent intention were highly acceptable.

Conversely, nurses in Factor 2 expressed a view in which some punishment behaviors are more unacceptable than the use of physical force. For example, punishments that are used in long duration, executed with negative parent intention, or involve isolating the child were considered more unacceptable than mild forms of spanking. Further, the use of food as a form of punishment was highly unacceptable. These nurses believed abusive parenting behaviors are those that incite fear and uncertainty. On the other hand, a controlled use of physical force to

punish a child that does not result in physical injuries was considered a reasonable consequence of child misbehavior.

Nurses in Factor 1 were significantly older than nurses in Factor 2. Although small sample sizes precluded drawing further inferences, descriptive comparisons showed there was a higher proportion of white/Caucasian nurses who were parents and reported having received child maltreatment training in Factor 1. Demographic and professional characteristics may explain their differences in PD and CPA differentiations. However, studies with larger sample sizes are needed to fully test this claim.

Specific Aim 3: Describe how Chinese American mothers' differentiation between PD and CPA differ from those of pediatric nurses.

The analysis of aggregate data from Chinese American mothers and pediatric nurses uncovered 3 shared viewpoints on PD and CPA differentiation. The first viewpoint was endorsed by a majority of the participants, and represent a general view of differentiating acceptable and unacceptable parent discipline behaviors. Additionally, two variant viewpoints were uncovered that represent variations of the general view. The variant viewpoints were most distinct from one another between the 3 views.

Similar to findings from Specific Aims 1 and 2, there was wide consensus on most acceptable and unacceptable parent discipline behaviors across the viewpoints. However, the acceptability of punishments across the 3 views differed primarily by their potential to inflict injury, pain, or incite fear and uncertainty. These results were discussed in *Manuscript 4*.

The general viewpoint was defined by 38 pediatric nurses and a mix of foreign- and US-born Chinese American mothers. Those defining this view were comparatively older than those defining the variant views. These participants were aware of common signs of child abuse, but did not consider the use of physical force invariably unacceptable. For example, spanking was ranked more favorably than isolation or attention withdrawal for long durations. In this viewpoint, the differentiation between PD and CPA depended on the punishment's potential to inflict injury. However, the frequency of punishment and the parents' intent for the punishment did not affect the acceptability of PD behaviors. Withdrawing privileges was considered the optimal form of discipline.

The first variant viewpoint was endorsed by 5 pediatric nurses and 2 US-born Chinese American mothers. Their differentiation between PD and abuse was similar to the general view. However, this group considered the use of physical force invariably unacceptable. To these participants, PD differs from abuse by the punishment's potential to inflict pain. Positive parent intention (e.g. punishing the child to teach the child a lesson) anchored the definition for most acceptable parent discipline behaviors.

Four pediatric nurses and 3 foreign-born Chinese American mothers endorsed the second variant viewpoint. These participants were younger than participants who endorsed the other views, and differentiated PD from abuse by its potential to incite fear and uncertainty. The use of physical force was acceptable if it does not inflict serious injuries. However, punishments exercised in high frequency

were unacceptable. Punishments were also considered most unacceptable when exercised under negative parent intention or in an uncontrolled manner.

Exploratory Aim 1: Describe the influence of acculturation of Chinese American mothers' perceptions of PD and CPA

Chinese American mothers who were most acculturated (Factor 3) were most disapproving of using physical force as a parent discipline strategy. These mothers were all US-born, and considered hitting a child more unacceptable than any other forms of punishments.

The two remaining factors (Factor 1 and Factor 2) consisted of mothers who considered mild spanking (i.e. hitting the child on the buttocks or palms with an open hand) acceptable to some degree. Both factors were endorsed by a mix of foreign- and US-born Chinese American mothers, suggesting generational status as a proxy for acculturation was not a sensitive indicator to differentiate whether these mothers endorsed or opposed spanking.

Among mothers who endorsed spanking, the least acculturated mothers (Factor 2) were more cautious in their acceptance of using physical force compared to their more acculturated counterpart (Factor 1). For example, hitting the child on the buttocks was the only physical punishment behavior that was considered acceptable for mothers in Factor 2. In addition, these mothers also determined the acceptability of punishments based on overt physical outcomes (i.e. any sign of physical injury, including leaving a red mark, was considered highly unacceptable).

DISCUSSION SUMMARY

The purpose of this study was to examine how Chinese American mothers define and differentiate PD and CPA, and whether acculturation influences their perceptions of PD and CPA. Further, their differentiations were compared with those of one professional group of mandated reporters of child abuse (i.e. pediatric nurses). This study focused on the punishment of children between ages 3 and 6 because national data showed PD use peaks for children in this age group (Straus & Stewart, 1999; Zolotor, Theodore, Runyan, Chang, & Laskey, 2011).

To accomplish these goals, an innovative methodology (i.e. Q-methodology) was used to uncover existing viewpoints on PD and CPA differentiation based on how participants sort examples of different punishments into acceptable and unacceptable parent discipline behaviors. This study was conducted to examine the perceptions of PD and its differentiation from CPA among one group of minority parents who are underrepresented in PD research, despite being identified as being at risk for child abuse allegations due to their traditional parenting values. Further, no studies have directly examined how parents and mandated reporters of abuse differentiate PD and CPA, and whether their differentiations vary.

PD in the Chinese American culture encompasses behaviors that extend beyond its common definition. A compelling finding of this study was how Chinese American mothers defined PD, i.e. all punishments that involve the “body” or, in other words, a physical aspect were considered as PD. Contrary to the common definition of PD used in research, causing pain or using physical force are not necessary attributes of PD in the Chinese American culture. Although much of the

literature has discussed varying definitions of CPA across cultures and how traditional parenting practices may be mistaken for abuse (e.g. Davis, 2000; Futterman, 2003; Hansen, 1997; Levesque, 2000), this was the first study that identified potential differences in the definition of PD in one group of minority parents.

Five contextual domains of PD were identified. The overall findings of this study suggest the acceptability of PD and its differentiation from CPA are based on complex interactions among five contextual domains: specific discipline behaviors, intention, delivery, pattern of use, and outcome. The viewpoints uncovered in this study showed that PD and CPA differentiations vary by how these domains interact, which lends evidence to support the need to examine PD not only based on *whether* it is used, but also *how* it is used and the parents' intent. These results may fill an important gap in existing PD research, where studies examining the cultural and contextual factors surrounding PD, including the conditions under which it is exercised, are scarce (Ferguson, 2013).

There was wide consensus among mothers and nurses on the most acceptable and unacceptable punishments. The most unacceptable punishments were those that result in severe physical injuries, and the most acceptable punishments were those that do not inflict pain or involve the use of physical force (e.g. privilege or attention withdrawal). These agreements are consistent with the existing laws that are set up to protect children, which permit "reasonable" PD while prohibiting non-accidental infliction of injury (Coleman, Dodge, & Campbell, 2010).

The consensus on most acceptable and unacceptable parent discipline behaviors found in this study represents the current normative understanding and differentiation of PD versus CPA. These differentiations are broad and only address punishments that fall on the extreme ends of the PD-CPA spectrum. As a result, the acceptability of a wide range of parent discipline behaviors that fall between these extreme ends remain varied, which highlights the ambiguity that persists in differentiating PD and CPA. An enhanced understanding of these nuances are important as these nuances are central to determining abuse.

Some mothers and nurses considered the use of physical force to punish a child invariably unacceptable. This view of PD is consistent with the unconditional non-spanking perspective (Benjet & Kazdin, 2003). This view was endorsed by some pediatric nurses and Chinese American mothers who were most acculturated (e.g. US-born). They believed any use of physical force is invariably unacceptable, and any punishment that inflicts pain was also unacceptable. These mothers and nurses were less concerned with the emotional consequences of punishments, especially when they do not physically hurt the child (e.g. isolating the child in long durations). The mothers who endorse this view have the lowest risk of being reported for CPA. Further, the views of nurses and mothers who endorsed unconditional non-spanking are also most congruent with that currently promoted by health professionals in the US (e.g. American Academy of Pediatrics; 1998).

Some mothers and nurses considered the use of physical force to punish a child acceptable when non-physical discipline strategies had not been effective. This

view mirrors the conditional spanking perspective, which supports the use of mild physical force to enforce discipline when alternative, non-physical discipline strategies have not been effective (Benjet & Kazdin, 2003). This perspective was supported by nurses and mothers across generational statuses (i.e. foreign- or US-born), indicating some use of spanking remains commonly acceptable across these groups. However, there were disagreements in PD and CPA differentiations among those who endorsed conditional spanking.

For example, mothers and nurses shared 2 viewpoints that supported the conditional use of physical force to punish a child. However, the acceptability of punishments differed by the conditions and contexts surround their use. While one group viewed PD as unacceptable based on its potential to inflict injuries (e.g. hitting the child on the torso or head, or with an object, and leaving a red mark), the other group was indifferent towards how punishments are delivered, and considered punishments that inflict minor injuries (e.g. leaving a red mark) more acceptable than those that may incite fear or uncertainty (e.g. putting the child in a dark basement for 2 hours). These findings suggest the context surrounding PD use may be important indicators of acceptable and unacceptable discipline behaviors, and these nuances in PD and CPA distinctions are related to varying interactions between contextual domains of PD.

The disagreements on PD and CPA differentiation based on the PD domains identified in this study have not been captured in previous work. Further, it is unclear how different perceptions of PD and CPA based on the conditions of PD use may affect parents' risk for child abuse allegations; although disagreements

between parents and mandated reporters can certainly create a potential for increased vulnerability to being suspected for committing child abuse. Much research has examined the endorsement and use of conditional spanking in relation to long-term parenting and child outcomes (Gershoff, 2002; Larzelere, 2000), but those studies have not examined the use of conditional spanking within the context of its execution. More studies are needed to explicate these conditional relationships to enhance our understanding of how acceptable and unacceptable PD are defined, and whether variations of PD and CPA distinctions among conditional spankers influence their long-term outcomes.

Frequency of PD and parent intent behind PD were important factors for differentiating acceptable or unacceptable PD. An interesting interaction between frequency of PD, parents' intention for using PD, and parents' endorsement of using physical force for punishment was identified. Of note, the acceptability of punishments based on frequency and parent intention were starkly different between those who endorsed unconditional anti-spanking and conditional spanking. For unconditional anti-spankers, punishing the child frequently and with positive parent intention were highly acceptable. Conversely, conditional spankers were generally indifferent towards the frequency of punishments, although those with higher approval of using physical force expressed less approval of frequent punishments. Negative parent intent also anchored their definition of most unacceptable punishments. These findings suggest the frequency of PD and the parent intent behind PD are intertwined, and their relationships differed based on whether the use of physical force to punish children was perceived as acceptable.

Currently, most PD research uses frequency rating scales alone to measure PD (Benjet & Kazdin, 2003) without consideration of the parents' intent when PD is exercised. Examining these relationships, in addition to exploring the interactions between other PD domains, remain a promising area for further research.

Determining the acceptability of PD based on its potential to incite fear and uncertainty was a novel view on PD and abuse differentiation. This finding was uncovered among some of those who endorsed the conditional use of physical force for child discipline, and suggest an alternative approach to defining the acceptability of PD behaviors. This view on PD and CPA differentiation differs from the current law and reporting guidelines, which largely differentiates acceptable and unacceptable parent discipline behaviors based on physical outcomes. Indeed, no known study has examined the acceptability of PD behaviors based on children's emotional response to their use. Further, it is possible that a child's immediate psychological response to PD, particularly feelings of fear and uncertainty, may be an important factor explaining conflicting findings on PD and associated long-term child outcomes.

The strongest arguments against PD use are based on associations found between PD and long-term negative child mental health outcomes (e.g. increased internalizing and externalizing behaviors; Hao & Matsueda, 2006; Kerr, Lopez, Olson, & Sameroff, 2004; McLoyd & Smith, 2002; Ohene, Ireland, McNeely, & Borowsky, 2006). However, there remains another body of literature supporting the use of PD as an effective parenting strategy that reduces noncompliance, aggression, and other externalizing behaviors (Bean & Roberts, 1981; Larzelere, 2008; Taylor &

Redman, 2004). It is possible that children's heightened fear in response to PD mediates the effect of PD on long-term mental health outcomes. In addition, these relationships may be further moderated by the normativeness of PD use. For example, some evidence suggest the use of PD in a social environment where it is not the norm may increase the risk of parents using it in anger or in ways that invokes fear and anxiety in the child (Gershoff et al., 2010). Similarly, the likelihood of the child responding negatively towards PD also increases when its use is perceived to be uncommon (Gershoff et al., 2010; Lansford et al., 2005; Lansford & Dodge, 2008; Lansford, Deater-Deckard, Dodge, Bates, & Pettit, 2004). Taken together, our findings suggest the importance of assessing both physical and immediate psychological outcomes (i.e. fear and uncertainty) of PD in relation to the social and cultural context in order to fully comprehend the merit of its use.

Paradoxical effect of acculturation on endorsement of PD. This study found that the most acculturated Chinese American mothers (all born in the US) were least likely to endorse the use of physical force to punish children. This is in accordance with evidence that support an increased likelihood of breaking the intergenerational cycle of PD among Southeast Asian-Americans who were more acculturated (Tajima & Harachi, 2010). However, generational status (i.e. foreign- or US-born) did not distinguish whether parents endorsed or disapproved of spanking, i.e. viewpoints that support the use of conditional spanking were endorsed by both foreign- and US-born mothers.

There was one unexpected finding related to acculturation and endorsement of physical punishments. Among Chinese American mothers who endorsed the

conditional spanking perspective, those who were least acculturated were most conservative in their acceptance of spanking (i.e. only hitting the child on the buttocks was considered acceptable). These mothers (all born outside of the US) also used injury outcome as the primary indicator of CPA (i.e. punishments resulting in any injury signs were highly unacceptable). From the qualitative interviews, many foreign-born mothers stated they were cautious about using or disclosing their use of PD because *“you cannot hit your children in the US.”*

Contrary to the common notion that Chinese immigrant parents who are least acculturated are more likely to endorse the use of physical force for punishment, the results indicated that Chinese immigrant mothers who were least acculturated were keenly aware of the normative standard against PD use in the US. These mothers also appeared cognizant of their vulnerability to child abuse allegations due to their traditional parenting values that endorse the use of PD, thus defining unacceptable punishments based on reportable outcomes (i.e. signs of physical injuries). Although study findings that support these claims were anecdotal, and the small study samples precluded providing evidence for generalization, these relationships warrant further investigation to enhance our understanding of acculturation's influence on parenting practices and beliefs.

There were diverse PD and CPA differentiations among pediatric nurses. This study was designed to compare PD and CPA differentiations among Chinese American mothers and one professional group of mandated reporters (i.e. pediatric nurses) to explore differences in viewpoints as drivers for immigrant parents' risk of child abuse allegations. However, the results of this study suggest nurses'

viewpoints on PD and CPA are diverse. Although nurses agreed on most acceptable and unacceptable punishments (e.g. withdrawing privilege versus causing severe injuries), their views on punishments within those extreme ends of the PD-CPA spectrum differed based on the conditions under which PD is exercised.

Mandated reporters are adept at assessing injuries and identifying abuse based on overt physical outcomes, yet the difficulty in identifying and reporting abuse lies in the complex circumstances that are often presented with suspected cases of abuse (e.g. injuries that are less overt, or the child's disclosure of parent behaviors that lack a clear standard of acceptability; Eisbach and Driessnack, 2010). Since the legal distinction between CPA and acceptable PD only addresses punishments that are on extreme ends of the PD-CPA spectrum, mandated reporters have little guidance on establishing a congruent standard to determine the acceptability of parent discipline behaviors that fall within those extreme ends. Indeed, this study found varying PD and CPA differentiations among nurses that were largely nuanced by the acceptability of less extreme punishments.

Disagreements in nurses' perceptions of PD and CPA creates a potential for discrepant tendencies to report suspected child abuse, and this potential is greatest when nurses have to use their subjective judgments when presented with complex cases of suspected abuse. There is some evidence that suggest nurses rely on their intuition when reporting abuse (Ling & Luker, 2000). Further, a positive association between reporters' disapproval of PD (i.e. spanking) and the likelihood of identifying and reporting suspected abuse had been reported in the literature (Ashton, 2000). This study found that nurses not only differed by their endorsement

or disapproval of using physical force as punishment, their differentiations of acceptable and unacceptable discipline strategies also differed by *how* punishments are exercised. For example, the intention, frequency, or potential psychological sequelae of punishment contribute differently to determining the acceptability of its use across different views. Further, few studies have directly examined nurses' perceptions of PD and CPA in relation to their reporting decisions, and this area of research warrants further investigation.

The primary goals of this study were to examine how Chinese American mothers and pediatric nurses differentiate PD from CPA. Findings from this study confirmed some of the common perspectives on PD (i.e. unconditional anti-spanking and conditional spanking) and extended the knowledge on how these groups' opinions about punishments may differ based on definable elements (i.e. frequency and intention). Further, this study identified differences in PD and CPA differentiations among those who endorsed conditional spanking, a finding that has not been reported previously. The incongruent views on PD and CPA were found to differ by the conditions under which punishments are exercised based on 5 definable contextual domains of PD (i.e. the specific behavior, how it is delivered, the parents' intention, and its associated outcome and pattern of use). Although there was wide agreement on what discipline strategies constituted as acceptable punishment and abusive parent behaviors, the nuances found in PD and CPA differentiations may create a potential for discrepant risks for child abuse allegations among Chinese American mothers and disparate tendencies to report child abuse among pediatric nurses.

STRENGTHS AND LIMITATIONS

Several limitations of this study were identified. First, the small, convenient and snowball samples drawn from homogenous populations may limit the diversity of viewpoints uncovered. Second, the cross-sectional nature of this study precluded understanding acculturation's influence on PD and CPA differentiation over time. The stability of participants' perceptions could also not be assessed. Third, only mothers were included in this study, which limits our understanding of gender differences in perceptions of PD and CPA. Findings from this study were also limited to understanding perceptions of PD when used on children between ages 3 and 6, and cannot be generalized to parenting for children in other age groups.

The Q-sample (i.e. statements related to punishment behavior or outcome) was compiled from interviews with Chinese American mothers, and may not comprehensively represent the wide spectrum of discipline behaviors or outcomes across cultures. Therefore, findings from this study may only be interpreted within the context of Chinese American mothers' definitions of PD. Further, the Q-sample was sorted onto a predefined continuum ranging from "Most Unacceptable" to "Most Acceptable," and in the context of this study, "most unacceptable" discipline methods were framed as abusive punishments. This approach may have overgeneralized unacceptable punishments as abuse. However, the decision to use these response anchors was informed by best Q-methodological practice. That is, standard practice in sorting the Q-sample is to create a meaningful continuum of psychological extremes ranging from "most" to "most" (McKeown & Thomas, 2013),

and to avoid using definitional terms that may elicit aversive subjective responses (i.e. “abuse”).

Despite these limitations, the use of Q-methodology was an important strength of this study. This methodology enabled a systematic, empirical, and holistic examination of perceptions surround PD and CPA. The Q-sort procedure also bypassed potential response-set and social desirability biases that are common in other survey methods when used to examine highly sensitive topics, such as child maltreatment (see *Manuscript 1* for a fuller discussion of the methodological strengths of Q method). Further, this study included a vulnerable group of immigrant parents who have been underrepresented in PD research but identified as being at risk for CPA reports due to their traditional parenting beliefs and practices. Finally, this is the first study conducted using Q-methodology to uncover and compare different viewpoints on PD and CPA differentiation among parents and mandated reporters of child abuse. As such, it serves as a useful model for understanding PD and CPA across different cultural and immigrant populations.

IMPLICATIONS FOR NURSING RESEARCH AND PRACTICE

Nursing research on parenting, particularly across cultures and in the context of families, is not well developed (Gage, Evertett, & Bullock, 2006). However, nurses are ideally situated to advance the science in parenting, particularly on the perceptions and use of PD and its differentiation from CPA. Parenting is a complex social task, and parent behaviors are influenced by personal, social, and environmental factors. Nurses are trained to approach health-related phenomena with a holistic perspective, and are adept at examining the cultural and contextual

implications of parenting on the health and wellbeing of families with children.

Nurses are also mandated reporters of child abuse, and are stakeholders in developing best practices for child abuse reporting.

Findings from this study have important implications for healthcare providers, policy makers, and researchers. Nurses routinely work with immigrant and minority clients, families, and communities. They are well-suited to provide support to parents who are parenting in a culture where definitions of normative and acceptable parenting behaviors do not coincide with their traditional beliefs and practices. Nurses are also valuable in testing and implementing interventions to help these parents transition into their new culture. To enhance the services to these vulnerable groups, nurse should acquire a broad understanding of parenting values and behaviors across cultures. When parents who are at risk for child abuse allegations are identified, appropriate counseling and parent training should be implemented.

The viewpoints on PD and CPA differentiation uncovered from this sample of nurses suggest a diversity of opinions regarding acceptable and reportable parent discipline behaviors among professional mandated reporters. These findings have important implications for designing child abuse training programs that would address the nuances in differentiating PD from CPA, and set a congruent standard on child abuse reporting among mandated reporters. Standards for consistent identification and reporting of child abuse would also strengthen the law that is used to protect children and families. Lastly, the definable domains of PD identified

in this study may be used in future PD research to advance our knowledge in perceptions of different parenting behaviors and PD, and their associated outcomes.

RECOMMENDATIONS FOR FUTURE RESEARCH

Results from this study support the use of Q-methodology as a model for examining cultural discrepancies in parenting perceptions and behaviors. Several areas of research are identified that follow this line of inquiry. First, given its strengths for studying complex and value-laden phenomena, future research should continue to use Q-methodology to explore and uncover different viewpoints on PD and CPA differentiation across cultural, social, and professional groups. Findings from such studies may be the key to understanding different perceptions surrounding PD and further refining a societal standard on acceptable versus reportable parent discipline behaviors in a country composed of many immigrant groups.

Second, studies examining the relationships between parents' views on PD and CPA differentiation and child outcomes or parents' risk for child maltreatment allegations are imperative to determine its influence on children and families. Longitudinal designs that investigate changes in parent's PD and CPA differentiations are also needed to discern personal, social, or environmental factors that may influence perceptions of PD. For example, to date there have been no published studies directly examining the influence of acculturation, parity, or age of children on parents' PD and CPA differentiations over time.

Third, population-based research examining the characteristics of people who likely endorse specific views is essential as it would help identify and provide

support to parents who may be vulnerable to negative outcomes stemming from their perception or use of PD. Findings from these studies would propel efforts to develop interventions and practices to reduce stress and perceived discrimination in immigrants and minorities parenting in a culture that is different from their own.

Lastly, more research is needed to identify different viewpoints on PD and CPA differentiation among mandated reporters to enhance our understanding of these professionals' reporting decisions. Further, it is crucial to examine how varying views on PD and CPA differentiation influence mandated reports' suspicion, identification, and reporting of child abuse. Advancing our knowledge in parents' and mandated reporters' perceptions of PD and CPA would also inform and improve existing child maltreatment training programs to help mandated reporters identify child abuse across cultures and settings.

CONCLUSIONS

Establishing a normative understanding of acceptable and unacceptable parent discipline behaviors will benefit parents who are raising children in a culture that is different from their own. Although there was wide agreement on most acceptable and unacceptable parent discipline behaviors among Chinese American mothers and pediatric nurses, the nuances in PD and CPA differentiations between these groups create a potential for discrepant risks for child abuse allegations among Chinese American mothers and disparate tendencies to report child abuse among pediatric nurses. The decision to report suspected child abuse is complex and difficult for nurses, and reports of unsubstantiated child abuse can be taxing on families. It is imperative to examine how PD and CPA are differentiated across

different social, cultural, and professional groups, and investigate how different perceptions of PD and CPA relate to critical long-term outcomes in order to address the needs of families with young children and the professionals who serve them.

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APPENDIX A: STUDY INSTRUMENTS

QUALITATIVE INTERVIEW GUIDE

I. Introductory Script

Thank you so much for taking the time to talk with me today. I really appreciate your willingness to participate in this study. Our interview is designed to take 30 to 50 minutes, but sometimes it may go longer. I want to be mindful of your time, so is there a time you need us to finish up by today?

[Wait for response – negotiate appropriate time to wrap up interview if necessary]

Just to give you an idea on what to expect during the interview, I will start off by asking you some very broad questions about physical discipline. Different people have different thoughts about physical discipline and child abuse. In this study, I want to know what Chinese people think about these issues.

I will not be asking any questions about how you discipline your children. You can answer my questions based on what you believe about physical discipline or how you think a typical Chinese person might answer these questions. Do you have any questions so far?

[Wait for response – explain as appropriate]

I have an interview guide with questions that I may refer from time to time to make sure I don't leave out any questions. So I can remember your comments, I will be recording this interview and I may also take some notes. You can stop the interview at any time. I won't ask any questions that could identify you. Is it okay if I start recording now?

[Wait for response. Turn on audio-recording devices.]

Do you have any questions for me before we begin?

[Wait for response, then begin interview.]

II. Verbal Consent

I want to start off by telling you the purpose of this study and make sure we have on record that you have agreed to speak with me today. Again, I will not ask you any information that will help me or others identify you in the future. I will read from a script that I have prepared:

[Read from verbal consent script.]

Is it okay with you that we continue with our interview?

[Wait for response, proceed as appropriate.]

III. General Discipline Practices

I will start off by asking you some general questions about disciplining children in the Chinese community.

1. In general, what are some typical practices that you think a Chinese parent may use when disciplining a child that misbehaves?
2. In the Chinese community, what do you think are some of the common child misbehaviors that parents may discipline a child for?
 - a. What are some of the common child misbehaviors in children between the ages of 3 and 6?
3. How do you think Chinese parents see these child behaviors differently than Western parents?
 - a. What (if any) are some of the main differences between how Chinese children and Western children behave?
 - b. What about children between the ages of 3 and 6?

IV. Specific Examples of Physical Discipline Practices

Thank you for those answers. Now I'd like to have a more in-depth discussion about different types of physical discipline practices. For the following questions, I will talk about disciplining young children (i.e. between ages 3 and 6). You can answer them using your own experience or by thinking about the general Chinese community that you know.

1. What do you think are some of the common ways to discipline a child between 3 and 6 years old?
2. Think of all the ways Chinese parents you know have used physical discipline. If you can, please name as many as come to mind.
3. If you have to name three physical discipline practices that are mild to normal in the Chinese community, what would they be?
4. If you have to name three physical discipline practices that are considered harsh in the Chinese community, what would they be?

V. Examples of Abusive Parenting Behaviors

Thank you for those responses. I have already learned a lot. In the final set of questions, I want to learn more about how Chinese parents view physical discipline and child abuse. Again, you can answer them based on what you think or what you think a typical Chinese person would say. Please feel free to stop me if you have any questions at any time.

1. Can you give me some examples of discipline behaviors that may be difficult to tell if they are physical discipline or child abuse?
 - a. What do you think different Chinese parents would say about these behaviors?
2. What are some of the physical discipline behaviors that are not okay to use in young children?
 - a. What do you think may be some of the reasons why they are not okay?

3. Give me some examples of behaviors that are definitely considered child physical abuse.
 - a. What do you think different Chinese parents would say about these behaviors?
4. How do you think Chinese parents differentiate physical discipline from child abuse?

Probes: (a) Injury outcomes? (e.g. leaving marks, bruises, cuts, etc.)

(b) Mode of delivery?

 - i. Use of object? What kinds?
 - ii. Location on body?

(c) Duration (e.g. # of times, for how long)

IV. Closing Remarks

Thank you for your answers. You have given me a lot of great information. Is there anything else that you'd like to share about parenting in the Chinese culture?

Thank you for sharing your thoughts with us today.

[End audio-recording.]

V. Post-Interview Tasks

- Give participant honorarium.
- Ask participant if they can be contacted again to share findings and verify Q-sample

VI. Important Prompts

- If/when interviewee begins to get off track: "I want to be very careful with your time, and want to be sure to get all your thoughts. So I'd like to move to the next question if that's okay with you."
- If/when interviewee sounds upset: "If this upsets you at all, we can talk about resources you can access or discuss how to deal with this."
- If/when interviewee finds it difficult to elicit disciplinary behaviors, use child behavior vignettes below:

Child Behavior Vignettes:

In the following vignettes, I will give you a short description of a child misbehavior that many parents may use physical discipline for. Please give examples of what different Chinese parents would do:

1. A child refuses to hold hands when crossing a busy street
2. A mother repeatedly told her child to stop running around the house, but the child continues to run around the house
3. Despite a mother patiently trying, the child refuses to eat vegetables and throws them on the floor
4. A child refuses to share toys at the playground and hits another child who tries to join in
5. A mother walks into her child's room and finds the child has ripped off pieces of wallpaper from the wall
6. A child angrily grabs a treasured vase and smashes it on the ground, shattering it into pieces.
7. Despite being told not to many times, a child pulls the pet's tail hard.
8. A child who is jealous of a new baby in the family, sneaks into the baby's room and tries to cover it with a pillow when the mother isn't looking.
9. A child being verbally disciplined by the parent, uses a swear word.

FINAL Q-SAMPLE

The final Q-sample consists of 71 statements, each related to a behavior or outcome of punishing a child between the ages of 3 and 6. Each statement was translated and back-translated between English and Chinese, and randomly assigned a number from 1 to 71 for analysis.

No.	English	Traditional Chinese	Simplified Chinese
1	Punishing the child to teach the child a lesson	懲罰孩子以讓孩子得到教訓	惩罚孩子以让孩子得到教训
2	Punishing the child to release the parent's anger and frustration	懲罰孩子以發洩父母的憤怒及沮喪	惩罚孩子以发泄父母的愤怒及沮丧
3	Hitting the child on the face	打孩子的臉部	打孩子的脸部
4	Hitting the child on the head	打孩子的頭部	打孩子的头部
5	Hitting the child on the chest	打孩子的胸口	打孩子的胸口
6	Hitting the child with an open hand	用手掌打孩子	用手掌打孩子
7	Punishing the child daily	每天懲罰孩子	每天惩罚孩子
8	Punishing the child few times a year	每年懲罰孩子數次	每年惩罚孩子数次
9	Causing the child to bleed	令孩子流血	令孩子流血
10	Causing the child to have a single mark on the body	令孩子身體留上有單一傷痕	令孩子身体留上有单一伤痕
11	Pulling on the child's ear	拉孩子的耳朵	拉孩子的耳朵
12	Cutting the child's hair	剪孩子的頭髮	剪孩子的头发
13	Not allowing the child to play with friends	不讓孩子與朋友玩耍	不让孩子与朋友玩耍
14	Not allowing the child to have food or drinks for a day	全日不讓孩子進食或飲水	全日不让孩子进食或饮水
15	Making the child stand outside the house for 5 minutes	令孩子於屋外站立 5 分鐘	令孩子于屋外站立 5 分钟
16	Making the child kneel for 5 minutes	令孩子下跪 5 分鐘	令孩子下跪 5 分钟
17	Ignoring the child for 5 minutes	不理會孩子 5 分鐘	不理睬孩子 5 分钟
18	Putting the child in a time-out chair for 5 minutes	把孩子放在安靜椅 (time out chair) 上 5 分鐘	把孩子放在安静椅 (time out chair) 上 5 分钟
19	Punishing the child to get the child's attention	懲罰孩子以得到孩子的注意	惩罚孩子以得到孩子的注意
20	Punishing the child to make the parent feel better	懲罰孩子以讓父母情緒好轉	惩罚孩子以让父母情绪好转
21	Hitting the child on the buttocks	打孩子的屁股	打孩子的屁股
22	Hitting the child on the stomach	打孩子的腹部	打孩子的腹部
23	Tying the child onto a chair	縛孩子在椅子上	缚孩子在椅子上

No.	English	Traditional Chinese	Simplified Chinese
24	Hitting the child with a fist	用拳頭打孩子	用拳头打孩子
25	Punishing the child weekly	每週懲罰孩子	每周惩罚孩子
26	Causing the child to have red mark(s)	令孩子留有紅印	令孩子留有红印
27	Causing the child to have burn(s)	令孩子留有被燒傷的痕跡	令孩子留有被烧伤的痕迹
28	Causing the child to have 2 to 5 marks on the body	令孩子身體上留有 2-5 處傷痕	令孩子身体上留有 2-5 处伤痕
29	Putting hot sauce in the child's mouth	把辣椒醬放進孩子的嘴裡	把辣椒酱放进孩子的嘴里
30	Grabbing the child and holding the child tightly	捉住孩子並用力緊緊抓著孩子	捉住孩子并用力紧紧抓著孩子
31	Taking away the child's favorite item/ toy	拿走孩子最喜歡的物件/玩具	拿走孩子最喜欢的物件/玩具
32	Making the child do household chores	令孩子做家務	令孩子做家务
33	Making the child stand outside the house for 2 hours	令孩子於屋外站立 2 小時	令孩子于屋外站立 2 小时
34	Making the child kneel for 2 hours	令孩子下跪 2 小時	令孩子下跪 2 小时
35	Ignoring the child for 2 hours	不理會孩子 2 小時	不理睬孩子 2 小时
36	Putting the child in a time-out chair for 2 hours	把孩子放在安靜椅 (time out chair) 上 2 小時	把孩子放在安静椅 (time out chair) 上 2 小时
37	Punishing the child to change the child's behavior	懲罰孩子以改變孩子的行為	惩罚孩子以改变孩子的行为
38	Punishing the child to make the child afraid	懲罰孩子以令孩子害怕	惩罚孩子以令孩子害怕
39	Hitting the child on the palms	打孩子的手掌	打孩子的手掌
40	Hitting the child on the back	打孩子的背部	打孩子的背部
41	Pinching the child	捏孩子	捏孩子
42	Hitting the child with any object available at the time	以當時任何可用的物件打孩子	以当时任何可用的物件打孩子
43	Causing the child to have bruise(s)	令孩子留有瘀傷	令孩子留有瘀伤
44	Causing the child to have bone fracture(s)	令孩子骨折	令孩子骨折
45	Causing the child to have more than 5 marks on the body	令孩子身體上留有 5 處以上的傷痕	令孩子身体上留有 5 处以上的伤痕
46	Shaking the child vigorously	大力搖晃孩子	大力摇晃孩子
47	Force-feeding the child the rest of his/her meal	強迫餵食孩子剩餘的食物	强迫喂食孩子剩余的食物
48	Not allowing the child to have a snack	不讓孩子吃零食	不让孩子吃零食
49	Making the child do more homework	令孩子做更多功課	令孩子做更多功课
50	Making the child exercise for 5 minutes	令孩子做運動 5 分鐘	令孩子做运动 5 分钟
51	Making the child stand facing a wall for 5 minutes	令孩子面壁 5 分鐘	令孩子面壁 5 分钟
52	Locking the child in a room for 5 minutes	把孩子鎖於房間內 5 分鐘	把孩子锁于房间内 5 分钟
53	Putting the child in a dark basement for 5 minutes	把孩子放於黑暗的地窖內 5 分鐘	把孩子放于黑暗的地窖內 5 分钟

No.	English	Traditional Chinese	Simplified Chinese
54	Punishing the child to control the child	懲罰孩子以控制孩子	惩罚孩子以控制孩子
55	Punishing the child to make the child work harder	懲罰孩子以令孩子更努力	惩罚孩子以令孩子更努力
56	Hitting the child on the thighs	打孩子的大腿	打孩子的大腿
57	Hitting the child on the arms	打孩子的手臂	打孩子的手臂
58	Hitting the child with the same designated object every time	每次以相同的指定物件打孩子	每次以相同的指定物件打孩子
59	Hitting the child with objects that are less likely to cause injury	以較不會構成傷害的物件打孩子	以较不会构成伤害的物件打孩子
60	Punishing the child monthly	每月懲罰孩子	每月惩罚孩子
61	Causing the child to have scar(s)	令孩子留有疤痕	令孩子留有疤痕
62	Causing the child to have swelling/welts	令孩子留有腫脹/鞭痕	令孩子留有肿胀/鞭痕
63	Causing the child to have marks in different stages of healing	令孩子身體上留有於康復不同階段中的傷痕	令孩子身体上留有于康复不同阶段中的伤痕
64	Taking the child's clothes off before hitting the child	打孩子前先脫下孩子的衣服	打孩子前先脱下孩子的衣服
65	Not allowing the child watch television	不讓孩子看電視	不让孩子看电视
66	Not allowing the child to have a meal	不讓孩子吃一餐飯	不让孩子吃一餐饭
67	Making the child play the piano for 3 hours	令孩子練鋼琴 3 小時	令孩子练钢琴 3 小时
68	Making the child exercise for 2 hours	令孩子做運動 2 小時	令孩子做运动 2 小时
69	Making the child stand facing a wall for 2 hours	令孩子面壁 2 小時	令孩子面壁 2 小时
70	Locking the child in a room for 2 hours	把孩子鎖於房間內 2 小時	把孩子锁于房间内 2 小时
71	Putting the child in a dark basement for 2 hours	把孩子放於黑暗的地窖內 2 小時	把孩子放于黑暗的地窖内 2 小时

SORTING INSTRUCTIONS SCRIPT

In the following exercise, we want to know what you think are acceptable and unacceptable parenting behaviors when punishing a child between 3-6 years old. There are no right or wrong answers. Even if you are not sure, please try to complete the task the best that you can. The information you provide will be kept strictly confidential

You are given a deck of 71 cards. On each card, there is one statement related to either the behavior or the outcome of punishing a child. Each statement is different and you may have a different opinion about each statement. You will be asked to sort these statements in two steps. At any point during the sorting processes, you can rearrange the cards any way you want until you are happy with your sort. You can take as much time as your need.

1. In the first step, please read the statements one at a time and sort the statements into three piles – acceptable, unacceptable, and not sure. If you have any questions, please let me know.

In the next step, you will be asked to sort all the statements and place them on a chart. On this chart, there are 71 boxes, and you are asked to place only one statement in each box. There are 13 columns on this chart, and we assume all statements placed in each column are ranked the same to you. You will place the statements you felt were unacceptable on the left hand side, the statements that you were not sure about in the middle, and the statements you felt were acceptable on the right hand side. We will work on your piles one at a time.

2. Let's start with your pile of statements that are unacceptable. Your job is now to allocate each of these statements a ranking position on the left-hand side of the chart. Place the statements that you find most unacceptable to the very left hand side, and gradually sort less unacceptable statements towards the middle. In this case, you will place the 4 statements you find most unacceptable on the first column on the left, then the next 5 statements that you find less unacceptable on the second column, and so forth. Continue placing the statements into the boxes on the left hand side of the chart until all the unacceptable statements have been allocated a spot on the chart. Do not worry if you cannot fit the statement into the exact column that you want, we just want to get an overall picture of how you sort these statements.
3. Now let's do the same for your pile of statements that are acceptable. The most acceptable statements go on the very right-hand side. You can place 4 statements that are most acceptable to you on the first column to the right, and the next 5 acceptable statements on the second column to the right. Continue placing these statements into the boxes on the right hand side of the chart until all the acceptable statements have been allocated a spot. Again, take as much time as you need and you can rearrange the cards any way you want until you are happy with your sort.
4. The remaining statements are the ones that you were not sure about. These statements may be difficult to sort because you probably don't have strong opinions about them. Try to arrange the statements and place the statements that you find more acceptable in the remaining boxes to the right and the statements that you find more unacceptable in the remaining boxes to the left. Even if you place a statement towards the right hand side, it does not mean that you think it is acceptable, it just means that the statement is more acceptable relative to the other statements. When you are finished, all the boxes should have one statement in it.

Please take a final look at the chart and make sure you are happy with your sort.

Q-SORT CONTINUUM AND CONDITION OF INSTRUCTION

There are 71 statements related to either the behavior or the outcome of punishing a child. Please sort the statements based on what you think are most unacceptable to most acceptable parenting behaviors when **punishing a child between 3-6 years old**.

在71張卡上，每張卡均寫上一項與懲罰孩子的行為或結果有關的陳述。請將陳述分類為您認為懲罰3-6歲的兒童時最不可接受到最可接受的教育行為。

[illegible]

DEMOGRAPHIC QUESTIONNAIRE (CHINESE AMERICAN MOTHERS)

個人資料調查問卷

ID#:

Your completion of this survey or questionnaire will serve as your consent to be in this research study. 您完成本調查或問卷即代表同意參與本研究調查。

Please answer the following questions:

請回答下列問題：

1. What is your age?

您的年齡是？ _____

2. What is your marital status? (Please circle one)

您的婚姻狀況是？（請圈一個）

a. Single

單身

b. Married

已婚

c. Divorced

離婚

d. Widowed

喪偶

3. How many years have you lived in the United States?

您於美國居住了多少年？ _____

4. What is your generational status? (e.g. first, second, or third generation Chinese American)

您的世代狀況是？（例如，您是第一代、第二代還是第三代美籍華人？）

5. Where is your family's origin? (Please circle one)

您的家庭原居地是哪裡？（請圈一個）

a. China

中國

b. Taiwan

台灣

c. Hong Kong

香港

d. If other, please specify:

如其他，請說明：_____

6. How many biological children do you have?

您有多少名親生子女？ _____

7. Please list the ages of all of your children:

請列出您所有子女的年齡： _____

8. Including you, how many people are currently living in the same home as you?

包括您在內，現在有多少人（成人和兒童）與您一起居住？

DEMOGRAPHIC AND NURSING BACKGROUND QUESTIONNAIRE

1. What is your sex? Male Female
2. What is your age? _____
3. What is your current job position?
Pediatric nurse Pediatric nurse practitioner
Other (please describe: _____)
4. What is your highest nursing degree obtained?
ADN BSN MSN PhD/DNP Other (please specify: _____)
5. How many years have you worked in the pediatric field? _____
6. Have you ever received any training in child abuse identification and/or reporting? Yes No
7. Do you have any children? Yes No
8. Were you born in the U.S.? Yes No
9. Which racial/ethnic group best describes you?
Black or African-American White American Indian
Asian or Pacific Islander Multiracial Other (Describe: _____)
10. Would you consider yourself to be Hispanic or Latino? Yes No

APPENDIX B: COMPOSITE Q-SORTS BY SPECIFIC AIM

Figure A.1 Composite Q-Sort of Specific Aim 1: Factor 1

Factor 1												
Most Unacceptable						Most Acceptable						
-6	-5	-4	-3	-2	-1	0	+1	+2	+3	+4	+5	+6
Causing the child to have burn(s)	Causing the child to bleed	Causing the child to have swelling/welts	Causing the child to have scar(s)	Hitting the child on the back	Hitting the child on the face	Shaking the child vigorously	Making the child exercise for 2 hours	Taking the child's clothes off before hitting the child	Hitting the child with objects that are less likely to cause injury	Hitting the child with an open hand	Hitting the child on the buttocks	Putting the child in a time-out chair for 5 minutes
Causing the child to have bone fracture(s)	Causing the child to have 2 to 5 marks on the body	Hitting the child on the head	Hitting the child on the stomach	Hitting the child with any object available at the time	Causing the child to have red mark(s)	Tying the child onto a chair	Pinching the child	Hitting the child on the thighs	Punishing the child to control the child	Hitting the child on the palms	Not allowing the child to have a snack	Ignoring the child for 5 minutes
Causing the child to have more than 5 marks on the body	Causing the child to have marks in different stages of healing	Hitting the child on the chest	Hitting the child with a fist	Causing the child to have a single mark on the body	Punishing the child to make the parent feel better	Putting hot sauce in the child's mouth	Cutting the child's hair	Hitting the child on the arms	Punishing the child to get the child's attention	Making the child do more homework	Punishing the child to change the child's behavior	Making the child stand facing a wall for 5 minutes
Not allowing the child to have food or drinks for a day	Putting the child in a dark basement for 2 hours	Punishing the child to release the parent's anger and frustration	Causing the child to have bruise(s)	Making the child stand facing a wall for 2 hours	Making the child stand outside the house for 5 minutes	Force-feeding the child the rest of his/her meal	Making the child play the piano for 3 hours	Hitting the child with the same designated object every time	Grabbing the child and holding the child tightly	Making the child exercise for 5 minutes	Making the child do household chores	Not allowing the child watch television
	Making the child stand outside the house for 2 hours	Making the child kneel for 2 hours	Locking the child in a room for 2 hours	Putting the child in a time-out chair for 2 hours	Making the child kneel for 5 minutes	Ignoring the child for 2 hours	Locking the child in a room for 5 minutes	Pulling on the child's ear	Punishing the child to make the child work harder	Punishing the child to teach the child a lesson	Taking away the child's favorite item/ toy	
			Punishing the child daily	Putting the child in a dark basement for 5 minutes	Punishing the child weekly	Punishing the child to make the child afraid	Punishing the child a few times a year	Not allowing the child to have a meal	Not allowing the child to play with friends			
						Punishing the child monthly						

Figure A.2 Composite Q-Sort of Specific Aim 1: Factor 2

Factor 2												
Most Unacceptable						Most Acceptable						
-6	-5	-4	-3	-2	-1	0	+1	+2	+3	+4	+5	+6
Causing the child to have burn(s)	Causing the child to have bone fracture(s)	Not allowing the child to have food or drinks for a day	Putting the child in a dark basement for 2 hours	Hitting the child on the back	Causing the child to have red mark(s)	Making the child stand outside the house for 2 hours	Punishing the child to make the parent feel better	Making the child stand facing a wall for 2 hours	Locking the child in a room for 2 hours	Making the child stand outside the house for 5 minutes	Force-feeding the child the rest of his/her meal	Making the child do household chores
Causing the child to have more than 5 marks on the body	Causing the child to bleed	Hitting the child on the head	Hitting the child on the chest	Hitting the child with any object available at the time	Putting hot sauce in the child's mouth	Punishing the child to release the parent's anger and frustration	Punishing the child to make the child afraid	Putting the child in a time-out chair for 2 hours	Putting the child in a dark basement for 5 minutes	Ignoring the child for 2 hours	Locking the child in a room for 5 minutes	Ignoring the child for 5 minutes
Causing the child to have 2 to 5 marks on the body	Causing the child to have marks in different stages of healing	Punishing the child daily	Hitting the child on the stomach	Hitting the child on the face	Cutting the child's hair	Making the child kneel for 2 hours	Pinching the child	Making the child kneel for 5 minutes	Making the child do more homework	Making the child exercise for 2 hours	Making the child exercise for 5 minutes	Making the child stand facing a wall for 5 minutes
Causing the child to have bruise(s)	Causing the child to have swelling/welts	Causing the child to have a single mark on the body	Hitting the child with a fist	Shaking the child vigorously	Punishing the child few times a year	Tying the child onto a chair	Punishing the child to control the child	Making the child play the piano for 3 hours	Punishing the child to teach the child a lesson	Not allowing the child to have a meal	Taking away the child's favorite item/ toy	Not allowing the child watch television
	Causing the child to have scar(s)	Taking the child's clothes off before hitting the child	Punishing the child weekly	Punishing the child monthly	Hitting the child on the thighs	Hitting the child on the arms	Punishing the child to make the child work harder	Hitting the child with objects that are less likely to cause injury	Not allowing the child to have a snack	Hitting the child on the buttocks	Putting the child in a time-out chair for 5 minutes	
			Hitting the child with an open hand	Pulling on the child's ear	Grabbing the child and holding the child tightly	Hitting the child with the same designated object every time	Hitting the child on the palms	Not allowing the child to play with friends	Punishing the child to change the child's behavior			
						Punishing the child to get the child's attention						

Figure A.3 Composite Q-Sort of Specific Aim 1: Factor 3

Factor 3												
Most Unacceptable						Most Acceptable						
-6	-5	-4	-3	-2	-1	0	+1	+2	+3	+4	+5	+6
Causing the child to have burn(s)	Causing the child to have more than 5 marks on the body	Causing the child to have 2 to 5 marks on the body	Putting the child in a dark basement for 2 hours	Causing the child to have a single mark on the body	Not allowing the child to have food or drinks for a day	Putting hot sauce in the child's mouth	Pulling on the child's ear	Cutting the child's hair	Grabbing the child and holding the child tightly	Punishing the child daily	Punishing the child to change the child's behavior	Not allowing the child to play with friends
Causing the child to have bone fracture(s)	Causing the child to have swelling/welts	Causing the child to have bruise(s)	Hitting the child on the back	Taking the child's clothes off before hitting the child	Hitting the child with an open hand	Making the child kneel for 2 hours	Pinching the child	Punishing the child to get the child's attention	Punishing the child to make the child work harder	Punishing the child weekly	Putting the child in a time-out chair for 5 minutes	Punishing the child to teach the child a lesson
Causing the child to bleed	Hitting the child on the head	Causing the child to have marks in different stages of healing	Hitting the child with any object available at the time	Hitting the child on the thighs	Punishing the child to release the parent's anger and frustration	Hitting the child on the palms	Punishing the child to control the child	Punishing the child to make the child afraid	Making the child kneel for 5 minutes	Punishing the child monthly	Making the child do household chores	Taking away the child's favorite item/ toy
Causing the child to have scar(s)	Hitting the child on the stomach	Hitting the child on the chest	Hitting the child on the face	Making the child stand outside the house for 2 hours	Punishing the child to make the parent feel better	Making the child stand facing a wall for 2 hours	Putting the child in a time-out chair for 2 hours	Making the child play the piano for 3 hours	Making the child do more homework	Punishing the child a few times a year	Ignoring the child for 5 minutes	Not allowing the child watch television
	Hitting the child with a fist	Shaking the child vigorously	Causing the child to have red mark(s)	Hitting the child on the arms	Locking the child in a room for 2 hours	Hitting the child with objects that are less likely to cause injury	Ignoring the child for 2 hours	Putting the child in a dark basement for 5 minutes	Locking the child in a room for 5 minutes	Not allowing the child to have a snack	Making the child stand facing a wall for 5 minutes	
			Tying the child onto a chair	Hitting the child with the same designated object every time	Hitting the child on the buttocks	Making the child exercise for 2 hours	Not allowing the child to have a meal	Making the child stand outside the house for 5 minutes	Making the child exercise for 5 minutes			
						Force-feeding the child the rest of his/her meal						

Figure A.4 Composite Q-Sort of Specific Aim 2: Factor 1

Factor 1												
Most Unacceptable						Most Acceptable						
-6	-5	-4	-3	-2	-1	0	+1	+2	+3	+4	+5	+6
Causing the child to have burn(s)	Causing the child to bleed	Hitting the child on the face	Hitting the child on the stomach	Punishing the child to release the parent's anger and frustration	Causing the child to have a single mark on the body	Punishing the child to make the parent feel better	Pulling on the child's ear	Punishing the child daily	Making the child stand outside the house for 5 minutes	Not allowing the child to play with friends	Punishing the child to teach the child a lesson	Putting the child in a time-out chair for 5 minutes
Causing the child to have bone fracture(s)	Causing the child to have bruise(s)	Hitting the child on the head	Causing the child to have red mark(s)	Hitting the child with an open hand	Not allowing the child to have food or drinks for a day	Hitting the child on the buttocks	Putting hot sauce in the child's mouth	Cutting the child's hair	Making the child kneel for 5 minutes	Ignoring the child for 5 minutes	Punishing the child a few times a year	Taking away the child's favorite item/toy
Causing the child to have scar(s)	Causing the child to have more than 5 marks on the body	Hitting the child on the chest	Causing the child to have 2 to 5 marks on the body	Tying the child onto a chair	Hitting the child on the palms	Making the child stand outside the house for 2 hours	Making the child kneel for 2 hours	Punishing the child to get the child's attention	Punishing the child weekly	Punishing the child to change the child's behavior	Making the child do household chores	Making the child do more homework
Causing the child to have swelling/welts	Shaking the child vigorously	Hitting the child with a fist	Hitting the child with any object available at the time	Hitting the child on the thighs	Pinching the child	Punishing the child to make the child afraid	Ignoring the child for 2 hours	Grabbing the child and holding the child tightly	Locking the child in a room for 5 minutes	Making the child exercise for 5 minutes	Not allowing the child to have a snack	Not allowing the child to watch television
	Causing the child to have marks in different stages of healing	Hitting the child on the back	Hitting the child with the same designated object every time	Hitting the child on the arms	Locking the child in a room for 2 hours	Force-feeding the child the rest of his/her meal	Putting the child in a time-out chair for 2 hours	Putting the child in a dark basement for 5 minutes	Punishing the child to control the child	Punishing the child monthly	Making the child stand facing a wall for 5 minutes	
			Hitting the child with objects that are less likely to cause injury	Taking the child's clothes off before hitting the child	Putting the child in a dark basement for 2 hours	Not allowing the child to have a meal	Making the child exercise for 2 hours	Making the child play the piano for 3 hours	Punishing the child to make the child work harder			
						Making the child stand facing a wall for 2 hours						

Figure A.5 Composite Q-Sort of Specific Aim 2: Factor 2

Factor 2

Most Unacceptable						Most Acceptable						
-6	-5	-4	-3	-2	-1	0	+1	+2	+3	+4	+5	+6
Causing the child to have bruise(s)	Punishing the child to release the parent's anger and frustration	Making the child stand outside the house for 2 hours	Causing the child to have 2 to 5 marks on the body	Causing the child to bleed	Punishing the child daily	Making the child stand outside the house for 5 minutes	Causing the child to have a single mark on the body	Hitting the child on the face	Hitting the child with an open hand	Punishing the child to teach the child a lesson	Ignoring the child for 5 minutes	Not allowing the child to play with friends
Causing the child to have bone fracture(s)	Causing the child to have burn(s)	Shaking the child vigorously	Putting hot sauce in the child's mouth	Not allowing the child to have food or drinks for a day	Cutting the child's hair	Hitting the child on the stomach	Causing the child to have red mark(s)	Hitting the child on the head	Punishing the child a few times a year	Making the child kneel for 5 minutes	Taking away the child's favorite item/toy	Putting the child in a time-out chair for 5 minutes
Causing the child to have swelling/welts	Punishing the child to make the child afraid	Causing the child to have marks in different stages of healing	Making the child kneel for 2 hours	Punishing the child to make the parent feel better	Punishing the child to get the child's attention	Punishing the child weekly	Grabbing the child and holding the child tightly	Hitting the child on the chest	Pulling on the child's ear	Hitting the child on the buttocks	Making the child exercise for 5 minutes	Making the child do household chores
Not allowing the child to have a meal	Causing the child to have scar(s)	Taking the child's clothes off before hitting the child	Ignoring the child for 2 hours	Tying the child onto a chair	Putting the child in a time-out chair for 2 hours	Hitting the child on the back	Hitting the child with any object available at the time	Hitting the child on the palms	Punishing the child to change the child's behavior	Making the child do more homework	Making the child stand facing a wall for 5 minutes	Not allowing the child to watch television
	Putting the child in a dark basement for 2 hours	Locking the child in a room for 2 hours	Causing the child to have more than 5 marks on the body	Hitting the child with a fist	Putting the child in a dark basement for 5 minutes	Not allowing the child to have a snack	Punishing the child to make the child work harder	Pinching the child	Hitting the child on the arms	Hitting the child with objects that are less likely to cause injuries	Hitting the child with the same designated object every time	
			Force-feeding the child the rest of his/her meal	Making the child stand facing a wall for 2 hours	Making the child exercise for 2 hours	Punishing the child to control the child	Hitting the child on the thighs	Locking the child in a room for 5 minutes	Punishing the child monthly			
						Making the child play the piano for 3 hours						

Figure A.6 Composite Q-Sort of Specific Aim 3: General Viewpoint

General Viewpoint													
Most Unacceptable							Most Acceptable						
-6	-5	-4	-3	-2	-1	0	+1	+2	+3	+4	+5	+6	
Causing the child to bleed	Shaking the child vigorously	Hitting the child on the face	Putting the child in a dark basement for 2 hours	Making the child kneel for 2 hours	Making the child stand facing a wall for 2 hours	Making the child exercise for 2 hours	Making the child play the piano for 3 hours	Making the child stand outside the house for 5 minutes	Making the child kneel for 5 minutes	Making the child do more homework	Making the child stand facing a wall for 5 minutes	Making the child do household chores	
Causing the child to have burn(s)	Hitting the child on the head	Hitting the child on the stomach	Tying the child onto a chair	Taking the child's clothes off before hitting the child	Making the child stand outside the house for 2 hours	Putting hot sauce in the child's mouth	Putting the child in a dark basement for 5 minutes	Cutting the child's hair	Grabbing the child and holding the child tightly	Making the child exercise for 5 minutes	Ignoring the child for 5 minutes	Putting the child in a time-out chair for 5 minutes	
Causing the child to have bone fracture(s)	Causing the child to have scar(s)	Hitting the child with a fist	Not allowing the child to have food or drinks for a day	Hitting the child on the back	Locking the child in a room for 2 hours	Force-feeding the child the rest of his/her meal	Pulling on the child's ear	Hitting the child on the palms	Hitting the child on the buttocks	Locking the child in a room for 5 minutes	Not allowing the child to play with friends	Taking away the child's favorite item/ toy	
Causing the child to have marks in different stages of healing	Causing the child to have swelling/ welts	Causing the child to have bruise(s)	Hitting the child on the chest	Hitting the child with the same designated object every time	Hitting the child on the thighs	Not allowing the child to have a meal	Pinching the child	Punishing the child to get the child's attention	Punishing the child to control the child	Not allowing the child to have a snack	Punishing the child to teach the child a lesson	Not allowing the child watch television	
	Causing the child to have more than 5 marks on the body	Causing the child to have 2 to 5 marks on the body	Hitting the child with any object available at the time	Punishing the child to release the parent's anger and frustration	Hitting the child with objects that are less likely to cause injury	Putting the child in a time-out chair for 2 hours	Ignoring the child for 2 hours	Punishing the child to make the child work harder	Punishing the child weekly	Punishing the child a few times a year	Punishing the child to change the child's behavior		
			Causing the child to have red mark(s)	Causing the child to have a single mark on the body	Punishing the child to make the parent feel better	Hitting the child on the arms	Hitting the child with an open hand	Punishing the child daily	Punishing the child monthly				
						Punishing the child to make the child afraid							

Figure A.7 Composite Q-Sort of Specific Aim 3: Variant Viewpoint 1

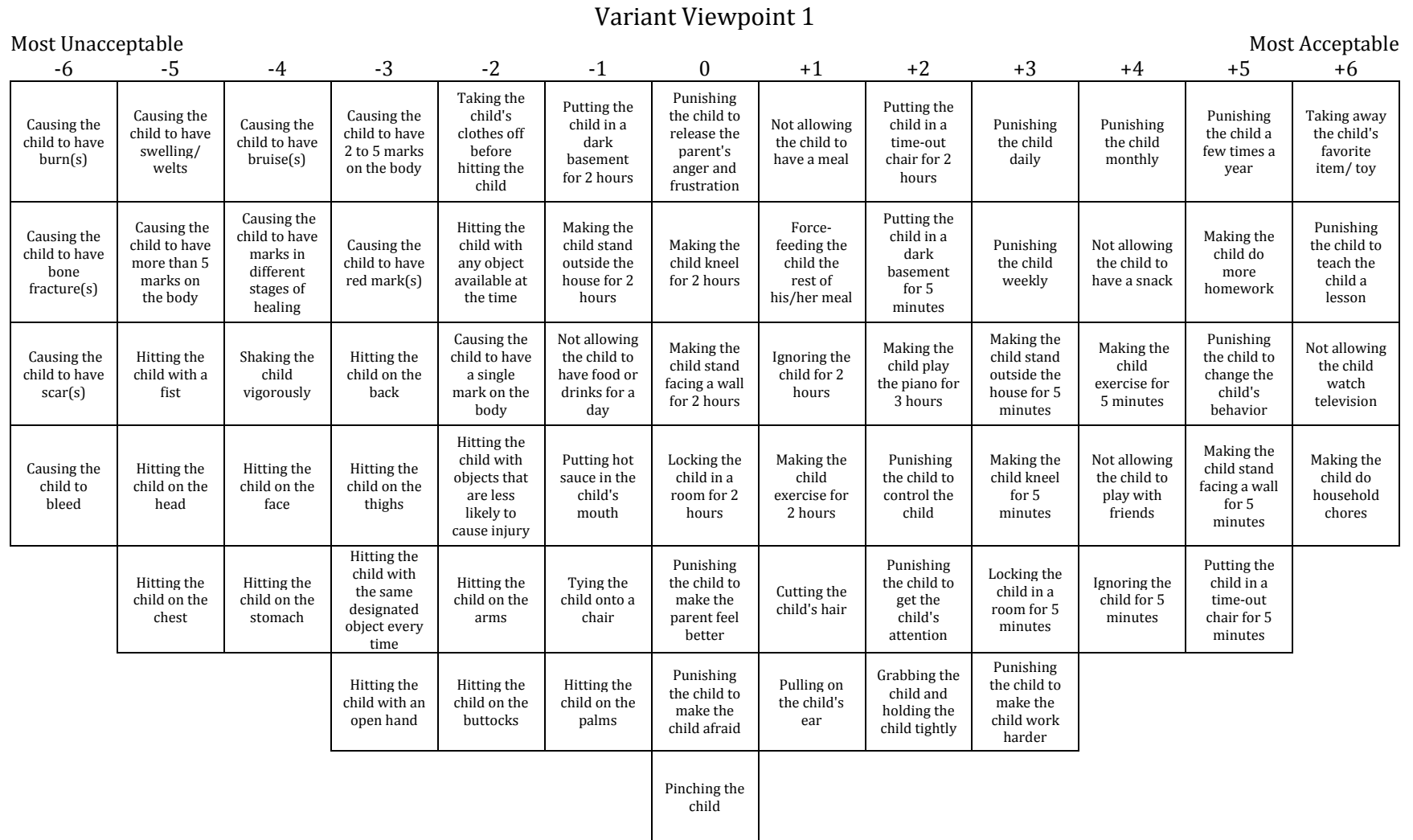


Figure A.8 Composite Q-Sort of Specific Aim 3: Variant Viewpoint 2

Variant Viewpoint 2												
Most Unacceptable												
-6	-5	-4	-3	-2	-1	0	+1	+2	+3	+4	+5	+6 Most Acceptable
Causing the child to have burn(s)	Causing the child to have scar(s)	Causing the child to have marks in different stages of healing	Causing the child to bleed	Tying the child onto a chair	Shaking the child vigorously	Hitting the child on the head	Causing the child to have red mark(s)	Hitting the child on the thighs	Hitting the child with the same designated object every time	Hitting the child with an open hand	Hitting the child on the buttocks	Making the child stand facing a wall for 5 minutes
Causing the child to have bone fracture(s)	Causing the child to have more than 5 marks on the body	Hitting the child with a fist	Making the child stand facing a wall for 2 hours	Taking the child's clothes off before hitting the child	Making the child exercise for 2 hours	Hitting the child on the face	Hitting the child on the back	Pinching the child	Hitting the child with objects that are less likely to cause injury	Hitting the child on the palms	Not allowing the child to play with friends	Ignoring the child for 5 minutes
Causing the child to have swelling/welts	Causing the child to have bruise(s)	Causing the child to have 2 to 5 marks on the body	Locking the child in a room for 2 hours	Punishing the child to make the parent feel better	Putting the child in a time-out chair for 2 hours	Hitting the child on the stomach	Causing the child to have a single mark on the body	Making the child kneel for 5 minutes	Hitting the child on the arms	Making the child do more homework	Punishing the child to teach the child a lesson	Making the child do household chores
Punishing the child to release the parent's anger and frustration	Putting the child in a dark basement for 2 hours	Not allowing the child to have food or drinks for a day	Putting hot sauce in the child's mouth	Force-feeding the child the rest of his/her meal	Putting the child in a dark basement for 5 minutes	Hitting the child on the chest	Making the child stand outside the house for 5 minutes	Punishing the child monthly	Pulling on the child's ear	Making the child exercise for 5 minutes	Punishing the child to change the child's behavior	Putting the child in a time-out chair for 5 minutes
	Making the child stand outside the house for 2 hours	Making the child kneel for 2 hours	Not allowing the child to have a meal	Punishing the child to make the child afraid	Cutting the child's hair	Hitting the child with any object available at the time	Punishing the child to get the child's attention	Locking the child in a room for 5 minutes	Punishing the child to make the child work harder	Taking away the child's favorite item/ toy	Not allowing the child watch television	
			Punishing the child daily	Ignoring the child for 2 hours	Punishing the child weekly	Making the child play the piano for 3 hours	Grabbing the child and holding the child tightly	Not allowing the child to have a snack	Punishing the child a few times a year			
						Punishing the child to control the child						

CURRICULUM VITAE

PART I

PERSONAL INFORMATION

Name: Grace Wing Ka Ho
Address: 3508 Blenheim Rd.
Phoenix, MD 21131
Phone: +1 (518) 488-9667
Email: gho4@jhu.edu

EDUCATION

2014	Doctor of Philosophy in Nursing	Johns Hopkins University School of Nursing Baltimore, MD
2011	Post-Masters Certificate in Forensic Nursing	Johns Hopkins University School of Nursing Baltimore, MD
2009	Bachelor of Science in Nursing	Johns Hopkins University School of Nursing Baltimore, MD
<i>Additional Training</i>		
2012	Q-Methodology Workshop	Kent State University Kent, OH

CURRENT LICENSURE AND CERTIFICATIONS

2009-Present Registered Nurse, License #R187203, Maryland Board of Nursing

PROFESSIONAL EXPERIENCE

09/12-Present	Research Nurse & Data Manager, Johns Hopkins University School of Nursing, Baltimore, MD
09/11-03/12	PhD Biostatistics Tutor, Johns Hopkins University School of Nursing. Baltimore, MD.
05/11-09/11	Research Assistant, PhD Department, Johns Hopkins University School of Nursing. Baltimore, MD.
06/10-12/10	Doctoral Assistant, Department of Acute and Chronic Care, Johns Hopkins University School of Nursing. Baltimore, MD.
10/09-07/10	Research Assistant, FASD Clinic, Kennedy Krieger Institute. Baltimore, MD
09/08-12/08	Research Fellow, Fuld Leadership Fellows Program in Clinical Nursing. Johns Hopkins Hospital. Baltimore, MD.
05/07-09/07	Nurse Intern & Clinical Auditor, Integrated Dialysis Facilities (HK) Ltd. Hong Kong

HONORS AND AWARDS

2013	Johns Hopkins University School of Nursing Graduate Assistantship Award
2012-2014	A.T. Mary Blades Foundation Scholarship
2012	ISSSS 2012 Scholarship
2012	Sigma Theta Tau International (STTI)/ American Nurses' Foundation Grant
2012	Southern Nursing Research Society (SNRS) Dissertation Award
2012	STTI Nu Beta Chapter Nursing Research Award
2010-2012	Ellen Levi Zamoiski Fellowship
2010-2012	Johns Hopkins University School of Nursing Scholarship
2010-2011	Caylor Award
2010-2011	Jonas Nurse Leaders Scholar
05/2009	BSN Graduate with Honors
05/2009	Inducted, Sigma Theta Tau International Honor Society of Nursing
2008	Fuld Fellow in Patient Care Quality and Safety
2007-2009	Dean's List, Johns Hopkins University School of Nursing

RESEARCH

09/12-Present	Trial of ascertaining individual preferences for loved ones' role in end-of-life decisions (TAILORED). PI: Marie T. Nolan. Role: Research nurse & data manager.
06/12-Present	Differentiating physical discipline from abuse: A comparison of Chinese American mothers and mandated nurse reporters of child abuse. PI: Grace W.K. Ho.
02/12-02/13	Violence Exposure Assessment Tool (VEAT) for young victims of domestic violence. Co-PI: Jane Gehring & Kathleen King. Role: Research consultant.
09/11-Present	Comparing two parenting programs for at-risk families. PI: Deborah A. Gross. Role: Research assistant.
07/11-08/13	Nurse volunteers' experiences after serving in Haiti post-earthquake. PI: Elizabeth Sloand. Role: Research assistant.

Research and Educational Grants

2012	"Differentiating Physical Discipline from Abuse: A Comparison of Chinese American Mothers and Mandated Nurse Reporters of Child Abuse." PI: Grace W.K. Ho. Percent effort: 100%. Funded by STTI Nu Beta Chapter Award, \$2,500; SNRS Dissertation Award, \$5,000; STTI/ANF Grant, \$7,500.
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SCHOLARSHIP (*data-based)

Peer-Reviewed Publications

1. *Ho, G.W.K., & Gross, D.A. (In Preparation). Differentiating physical discipline from abuse: Q-findings from Chinese American mothers and pediatric nurses.
2. *Ho, G.W.K., Kellogg, A., Skaggs, L., Johnson, J., & Nolan, M.A. (In Preparation). Patient and caregiver characteristics related to use of advance directives in terminally ill patients.
3. Ho, G.W.K. (In Preparation). Examining perceptions and attitudes in nursing research: The use of Likert scales versus Q.

4. *Ho, G.W.K., & Gross, D.A. (In Preparation). Pediatric nurses' views on acceptable versus unacceptable discipline behaviors: A Q-study.
5. Shillam, C.R., Ho, G., & Commodore-Mensah, Y. (2014). Online biostatistics: Evidence-based curriculum for Master's nursing education. *Journal of Nursing Education*, 53(4), 223-228.
6. *Ho, G.W.K. (2014). Acculturation and its implications on parenting for Chinese immigrants: A systematic review. *Journal of Transcultural Nursing*, 25(2), 145-158.
7. *Sloand, E., Ho, G., & Kub, J. (2013). Experiences of nurse volunteers in Haiti after the 2010 earthquake. *Research and Theory for Nursing Practice*, 27(3), 193-213.
8. *Sloand, E., Ho, G., Klimmek, R., Pho, A., & Kub, J. (2012). Nursing children after a disaster: A qualitative study of nurse volunteers and children after the Haiti earthquake. *Journal for Specialists in Pediatric Nursing*, 17(3), 242-253.

Presentations

1. *Ho, G.W.K. (2014). How Chinese American mothers and pediatric nurses differentiate physical discipline from child physical abuse: Findings from a Q-study. Poster presentation the 28th Annual SNRS Conference, February 12-15, 2014 in San Antonio, TX. (Regional)
2. *Ho, G.W.K. (2013). How do pediatric nurses differentiate physical discipline from abuse? Preliminary findings from a Q-study. Poster presentation at the STTI 42nd Biennial Convention, November 16-20, 2013 in Indianapolis, IN. (International)
3. Nolan, M.T., Ho, G.W.K., & Hodgson, N. (2013). Seminar on Grant Writing and Writing for Publication for Faculty and PhD students from Chinese Nursing PhD Program Consortium, June 17-21, 2013 at Peking Union Medical College School of Nursing, Beijing, China (International)
4. Ho, G.W.K. (2012). Differentiating physical discipline from abuse: A comparison of Chinese American mothers and mandated nurse reporters of child abuse. Oral presentation at the 28th Annual Q Conference, September 5-8, 2012 in Pittsburgh, PA. (International)

Posters

1. *Asano, R., Ho, G.W.K., Nolan, M.T., Kellogg, A., Hughes M., Sulmasy, D., Johnson, J., & Kub, J. (2014). Religious involvement and depressive symptoms in caregivers of terminally ill patients. Research Honors Program Poster Session, May 7, 2014 at Johns Hopkins University School of Nursing, Baltimore, MD. (Local)
2. *Rockwell, S., Ho, G.W.K., & Gross, D.A. (2014). Exploring the impact of maternal depression and stress on attendance and engagement in parent training programs. Research Honors Program Poster Session, May 7, 2014 at Johns Hopkins University School of Nursing, Baltimore, MD. (Local)

Book Chapters

1. Alhusen, J.L., Ho, G.W.K., Smith, K.F., & Campbell, J.C. (2014). Addressing intimate partner violence and child maltreatment: Challenges and opportunities. In J. Korbin & R. Krugman (Eds.), *Handbook of Child Maltreatment*. Netherlands: Springer.

EDITORIAL ACTIVITIES

2014	Invited manuscript reviewer, Journal of Family Studies
2014	Invited manuscript reviewer, Research in Nursing and Health
2011-2013	Ad hoc manuscript reviewer, Research in Nursing and Health
2011	Ad hoc manuscript reviewer, Nursing Outlook

PROFESSIONAL ACTIVITIES

08/12-Present	Member, International Society for the Scientific Study of Subjectivity
02/12-Present	Member, Southern Nursing Research Society
04/09-Present	Member, Sigma Theta Tau International Honor Society of Nursing

CURRICULUM VITAE

PART II

EDUCATIONAL ACTIVITIES

Spring 2014	NR.110.828 Measurement in Health Care Research, PhD, n=10. Guest Lecturer, "Measuring Subjectivities with Q."
Spring 2014	NR.110.814 Advanced Research Design II, PhD, n=10. Guest Lecturer, "An Intro to Q-methodology."
Spring 2014	NR.110.202.8101 Biostatistics, Online Undergraduate Pre-requisite, n=30. Teaching Assistant
Fall 2013	NR.110.202.8101 Biostatistics, Online Undergraduate Pre-requisite, n=40. Teaching Assistant
Fall 2013	Teaching Assistantship Seminar, PhD, n=10. Guest Speaker, "Getting the most out of your TA'ships: Strategies and lessons learned."
Summer 2013	Content development and instructional design for fully online undergraduate biostatistics course, NR.110.202.8101
Summer 2013	NR.110.507 Statistical Literacy and Reasoning in Nursing Research, MSN, n=14. Teaching Assistant
Spring 2013	NR.110.814 Advanced Research Design II, PhD, n=3. Guest Lecturer, "Q-methodology."
Spring 2013	NR.110.507 Statistical Literacy and Reasoning in Nursing Research, MSN, n=43. Teaching Assistant.
Fall 2012	NR.110.428/628 Fundamentals of Forensic Nursing, BSN/MSN, n=58. Teaching Assistant.
Fall 2012	NR.300.633/636 Injury Pathology and Advanced Trauma Assessments/ Practicum for Forensic Nurses, MSN, n=10. Teaching Assistant.
Fall 2011	NR.110.403.0101-0201 The Research Process in Nursing, BSN, n=119. Teaching Assistant

MENTORING

2014	BSN Research Honors Program, Ashley Fenton
2014	BSN Research Honors Program, Sydney Rockwell
2014	BSN Research Honors Program, Reiko Asano
2013	BSN Research Honors Program, Lauren Skaggs

ACADEMIC SERVICES

Johns Hopkins University School of Nursing

06/11-Present	Elected Member, Diversity and Cultural Competence Committee
06/11-07/12	Ethics Committee Representative, Doctoral Student Organization
01/11-09/11	Member, PhD Program Diversity Taskforce
01/10-12/10	Ethics Committee Representative, Graduate Student Organization

COMMUNITY SERVICES

01/13-Present	Member, Baltimore-Xiamen Sister City Committee
	Co-Chair, Health and Environment Sub-Committee